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*Iowa State University*

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DORN, FRED J.

THE EFFECT OF SIMILAR COUNSELOR-CLIENT SENSE MODALITY  
PREFERENCE ON COUNSELOR ATTRACTIVENESS

*Iowa State University*

PH.D.

1980

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The effect of similar counselor-client sense modality  
preference on counselor attractiveness

by

Fred J. Dorn

A Dissertation Submitted to the  
Graduate Faculty in Partial Fulfillment of  
The Requirements for the Degree of  
DOCTOR OF PHILOSOPHY

Department: Professional Studies in Education  
Major: Education (Counselor Education)

Approved:

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Iowa State University  
Ames, Iowa

1980

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## INTRODUCTION

Many factors contribute to the feelings of attraction people hold for each other. These vary in degree of intensity and some play a more important role than others in the development of interpersonal relationships. This becomes truly evident when one considers that at the onset of a possible relationship it either crystallizes or dissolves due to the feeling each person holds for the other.

Newcombe (1974) stated that "attraction refers to any direct orientation (on the part of one person toward another) which may be described in terms of sign (+ or -) and intensity" (p. 6). Thus, the life of a relationship is based on the intensity of positive or negative feelings of attraction that each person holds for the other.

Though the term "attraction" is most often associated with physical appearance and physical appearance does play an important role in the initial development of many relationships, individuals are attracted to each other for numerous reasons. Factors such as similar attitudes, values and interests, the degree of respect each person holds for another, the opinions of outside parties, group affiliations, the expected costs and rewards for engaging in the relationship, and the role and circumstances that each party assumes are all important aspects which activate and sustain many relationships (Duck 1977).

Recognizing that attraction does play an important role in the formation of many relationships, Goldstein (1966) and Strong (1968) have encouraged counseling researchers to examine and borrow from social psychology those theoretical concepts which might apply to the counseling relationship. The dyadic counselor-client relationship is often analogous to other relationships that are formed in a social context (Fiedler 1950).

Strong (1968) proposed that clients who are experiencing a cognitive dissonance seek out the services of counselors. This refers to the fact that the client's beliefs and attitudes about himself and the way he perceives himself to behave are inconsistent (Strong 1979). This concept was initially proposed by Festinger (1957) and later reconceptualized to fit the social psychological model by Aronson (1969).

The counselor's responsibility is to attempt to bridge this cognitive dissonance that the client is experiencing. Research to date suggests that, in conjunction with other methods, those factors which assist the counselor in accomplishing this task are: communicator attractiveness, credibility, and trustworthiness (Johnson and Matross 1977). Communicator attractiveness in this case refers to the qualities of warmth, liking, cooperativeness, and similarity.

Goldstein (1971), in quoting Bordin, 1959, reemphasizes the importance of counselor attractiveness by stating that:

The key to the influence of psychotherapy on the patient is in his relationship with the therapist. Virtually all efforts to theorize about psychotherapy are intended to describe and explain what attributes of interaction between the therapist and the patient will account for whatever behavior change results. (Goldstein 1971, p. 235).

Goldstein (1971) then stated that in an examination of previous studies on therapy, many researchers failed to experimentally manipulate the therapist-patient relationship so that causality could be determined. "One cannot conclude from this research that the quality of the relationship influences therapeutic outcome; one can only conclude that the two are associated" (p. 4). Thus, the emphasis has not been placed on examining the quality of the counseling relationship, but has been directed at the counselor and client independently rather than as a cooperating unit.

One area of counselor attractiveness that has received a great deal of research attention has been counselor-client similarity. The rationale for this thrust was based on the assumption that people who perceive themselves to be similar to others will have positive feelings toward those individuals (Byrne 1969).

The results in this area, however, have been disappointing. Investigations have matched counselors and clients on such variables as: values (Cook 1966; Martin 1978), gender (Herbert 1968), personality traits (Jones 1969; Mendelsohn and Geller 1963; Mendelsohn and Geller 1965; and Mendelsohn 1966), vocational preference (Cox and Thoresen 1977), attitudes (Beutler, Johnson, Neville, Elkins, and Jobe 1975; and

Cheney 1975), group membership (Spiegel 1976), and social interest (Zarski, Sweeney, and Barcikowski 1977).

The experiments have produced results which are both negligible (Meltzoff and Kornreich 1970) and inconclusive (Ross 1977). Specifically, this was because the variables examined addressed certain qualities that each participant in counseling possessed rather than what the effects of these qualities were on the actual counseling process.

In the same vein, Johnson and Matross (1977) suggested that contemplated research in the social psychological aspects of counseling should concentrate more on what the therapist does in the relationship rather than examining the reputed qualities that the therapist possesses. This will give counseling researchers an opportunity to determine any subsequent progress that occurs in a counseling relationship.

Language is an active behavior that is inherent in the counseling process. Therefore, it seems appropriate to examine the similarities in language use that are exhibited by the counselor and the client to determine whether they have any effect upon the perceived attractiveness of the counselor.

Richard Bandler and John Grinder (1975) proposed a model of language use which readily lends itself to determining the possible effects sense modality preference may have on the perceived attractiveness of the counselor by the client. The model states that people decode their experiences primarily through the senses of sight, sound,

and touch, and then communicate these experiences to others through language.

These authors (Bandler and Grinder) suggested that by examining the predicates persons use in constructing sentences, one can determine which sense modality an individual prefers. "Predicates" in this study refers to verbs, adverbs, and adjectives that a person uses. Examples of the three sense systems and corresponding predicates are contained in the following sentences.

He heard the screaming cat. (Auditory)

He saw the black cat. (Visual)

He petted the furry cat. (Kinesthetic)

In each sentence the subject (he) and the direct object (cat) remain consistent, but the verbs (heard, saw, petted) and the adjectives (screaming, black, furry) change. Additionally, even though the description of the experiences was changed by using verbs and adjectives that signalled which sense system was being utilized, heard and screaming (auditory) saw and black (visual), and petted and furry (kinesthetic), the basic interpretation of the experience did not. In this case a specific interaction occurred between the subject (he) and the direct object (cat). This concept is related to transformational grammar which states that though the message communicated is basic, the structure in which it is communicated is different (Bandler and Grinder 1975).

The authors suggested the following method for determining which sensory system is most highly prized by a client:

In order to identify which of the representational (sense) systems is the client's most highly valued one, the therapist needs only pay attention to the predicates which the client uses to describe his experiences. In describing his experiences, the client makes choices (usually unconsciously) about which words best represent his experience. Among these are a special set called predicates. Predicates are words used to describe portions of a person's experience which correspond to the processes and relationships in that experience. Predicates appear as verbs, adjectives, and adverbs in the sentences which the client uses to describe his experiences. (Bandler and Grinder 1975, p. 9).

Once this has been accomplished it is the therapist's task to begin intergrating similar sense predicates into his own natural language. The rationale is that when the therapist responds to the client in a similar sense modality, the client will perceive the counselor as more responsive and understanding (Bandler and Grinder 1975; Grinder and Bandler 1977).

One can envision this by considering the following dissimilar and similar exchanges.

Client: I heard the cat screaming. (Auditory)

Counselor: It was the cat you saw screaming. (Visual)

Effect: Negative

Client: I saw the cat running. (Visual)

Counselor: It was the cat you saw dash away. (Visual)

Effect: Positive

The investigation of sense modality preference as it might effect counselor attractiveness seems justified. It readily adheres to the concept of counselor-client similarity as set forth in the social

psychological model. Additionally, it addresses the criticism of the similarity model proposed by Ross (1977) and Johnson and Matross (1977). They stated that the major failing of investigations in these areas has been their focus. Specifically, emphasis has been placed upon the reputed qualities of the counselor, rather than his active behavior. Clients have been told about counselor attitudes, qualifications, or characteristics and then were asked to indicate the degree of attraction for a counselor. The focus in the future should be on variables which are more relevant to and active in the counseling process.

Determining the possibility of positive therapeutic outcomes through the examination of language is not a new endeavor in counseling research. Mahl and Schulze (1964) reported that past investigations have focused on verb/adjective ratios, verb tense analysis, frequency of various parts of speech, and the active/passive voice. Yet, the concept of sense modality similarity has yet to be examined empirically. Additionally, Altman (1974) stated that only a fraction of studies have been directed at language as it relates to attraction phenomena and these contain little conclusive evidence.

Therefore, by considering sense modality similarity as a form of counselor attractiveness, the research question is: Does similar sense modality preference of the counselor and client affect the client's attraction to the counselor?



### Purpose of the Study

The purpose of this study was to determine whether similar sense modality preference by the counselor during the counseling process would enhance the client's attraction toward the counselor. The subjects in this study listened to a series of tape recorded words. Each tape recording contained either visual, auditory, or kinesthetic predicates in order to manipulate sense modality preference. Audio-tape rather than video tape was utilized in order to control for the physical appearance of the counselor (Cash, et al. 1975). Counselor attractiveness was assessed by means of a self-report scale administered to the subjects after they listened to the tapes.

### Research Problems

To determine whether clients perceive counselors to be more attractive due to their use of similar sense modality predicates, these research problems were formulated.

1. To determine if there are any differences in perceived counselor attractiveness due to the sense modality preference of subjects.
2. To determine if there are any differences in perceived counselor attractiveness by subjects due to the sense modality preference of the counselor.
3. To determine if there are any differences in perceived counselor attractiveness by subjects due to subject gender.

## Hypotheses

- 1A There will be no significant differences in the ratings of male counselor attractiveness by visual subjects.
- 1B There will be no significant differences in the ratings of male counselor attractiveness by auditory subjects.
- 1C There will be no significant differences in the ratings of male counselor attractiveness by kinesthetic subjects.
- 1D There will be no significant differences in the ratings of female counselor attractiveness by visual subjects.
- 1E There will be no significant differences in the ratings of female counselor attractiveness by auditory subjects.
- 1F There will be no significant differences in the ratings of female counselor attractiveness by kinesthetic subjects.
- 2A There will be no significant differences in the rating of male visual counselor attractiveness by subjects.
- 2B There will be no significant differences in the rating of male auditory counselor attractiveness by subjects.
- 2C There will be no significant differences in the rating of male kinesthetic counselor attractiveness by subjects.
- 2D There will be no significant differences in the rating of female visual counselor attractiveness by subjects.
- 2E There will be no significant differences in the rating of female auditory counselor attractiveness.
- 2F There will be no significant differences in the rating of female kinesthetic counselor attractiveness.
- 3A There will be no significant differences in the ratings of male counselor attractiveness by male subjects.
- 3B There will be no significant differences in the ratings of male counselor attractiveness by female subjects.
- 3C There will be no significant differences in the ratings of female counselor attractiveness by male subjects.

- 3D There will be no significant differences in the ratings of female counselor attractiveness by female subjects.

### Limitations

The scope of this study was limited to eighty-seven white males and ninety-two white females. All subjects were enrolled in an undergraduate degree program at Texas A&M University, but their major subject areas varied. Sense modality preference was limited to the assessment of predicate use similarity as proposed by Bandler and Grinder (1975). Factors such as voice tone, voice quality, and rate of speech were beyond the control of this study. The assessment of predicate use dependency was determined by three specific procedures: a personal interview, a sense modality preference inventory, and a self-report indication of sense preference. The assessment of the subjects' level of social attraction for the counselor was limited to The Interpersonal Judgement Scale (Byrne 1971) and a self-report indication of counselor preference.

### Definitions

To facilitate preciseness, the following definitions were utilized in this study:

1. Sense Modality Preference--the dominant utilization of one of the three senses (visual, auditory, or kinesthetic) being considered in this study.
2. Sense Modality Similarity--the dominant utilization of one

of the three senses by two individuals. In this study, it was the use of the same sense by the counselor and the client.

The Iowa State University Committee on the Use of Human Subjects in Research reviewed this project and concluded that the rights and welfare of the human subjects were adequately protected, that risks were outweighed by the potential benefits and expected value of the knowledge sought, that confidentiality of data was assured and that informed consent was obtained by appropriate procedures.

## REVIEW OF THE LITERATURE

### Introduction

Combining two academic disciplines can often produce unexpected and positive results partially because when the two are brought together, aspects which were previously undetected, become obvious. This was the case when Goldstein (1966) suggested that counseling researchers could benefit immensely by extrapolating some theoretical assumptions from social psychology and applying them to counseling.

Giving consideration to the research findings in areas such as role expectation, interpersonal attraction, authoritarianism, and cognitive dissonance, Goldstein attempted to develop a justification for this particular line of inquiry. In order to substantiate it as a legitimate area of counseling research, however, he felt that additional experimentation would have to be initiated.

Strong (1968) attempted to delineate a model for the social psychological approach to counseling. Thirteen years later Strong (1979) again stated that although a sizeable research investment had been made in examining the social psychological approach, the surface had barely been scratched.

This review of the literature is based on that assumption. The first section is on the social psychological approach to counseling, and is an attempt to depict the social attraction and similarity of counselor and client as the key ingredients. In the second section, sense

modality preference as a form of counselor attraction is examined.

### Social psychological counseling

Strong (1968) initially described the social psychological process as one of interpersonal influence wherein clients seek counseling services when they are experiencing cognitive dissonance. Cognitive dissonance here meaning the way in which a client perceives himself to be is lacking in agreement with how he is actually behaving.

Throughout the counseling process, it is the therapist's role to assist the client in resolving these feelings of dissonance, but this can be accomplished only if the client views the counselor in a positive manner. For that reason, the counselor should utilize his social qualities to benefit the client. Qualities which assist the counselor are perceived expertness, trustworthiness, attractiveness, and involvement.

Perceived expertness is developed when the client sees the counselor as a person with specialized training which is often evidenced by certificates, diplomas, and titles. His behavior also indicates expertness, such as when he offers clients knowledgeable arguments and presents justification for them in a confident manner. Additionally, he is viewed as an expert when he is reputed to be one in his area.

Trustworthiness is the second ingredient which allows the counselor to be perceived in a positive manner. This is often developed when clients are aware of the counselor's reputation for honesty, view his social role as a physician, perceive his sincere and open manner,

and encounter his lack of desire and motivation to attain personal gain through the relationship. Many of these attributes have been used as a means of elevating one person's view of another as trustworthy.

The third ingredient which has allowed the counselor to develop a sense of social influence over the client is attraction. This attribute emerges from the counselor's behavior during the counseling process. Often conditions such as non-possessive warmth and unconditional positive regard enhance the client's view of the counselor. Additionally, feelings of compatibility and similarity cause clients to feel socially attracted to the counselor.

The social psychological approach to counseling can easily be described as a two phase process of interpersonal influence. Initially, when a counselor meets a client who is in a state of cognitive dissonance, he attempts to enhance his own credibility while simultaneously developing the persuasibility of the client. This is generally done by involving the client in the counseling process.

As a result of these processes and techniques, the probability of client change in reaction to counselor influence is maximized; the probability of the clients use of other avenues of reducing aroused dissonance is minimized. During the second phase, the counselor makes maximum use of the influence power he has built to implement the desired changes in client cognitive framework and behavior. The exact techniques he uses will depend upon his diagnosis of the problem, the facilities available, his own expertise, and his guiding theoretical model. (Strong 1968, p. 223).

It should be emphasized that the counselor should use whatever means are necessary and help the client achieve his goal.

### Similarity as a form of attraction

Social science researchers have long been interested in interpersonal attraction research (Berscheid and Walster 1969; Byrne 1969; 1971; Duck 1977; and Huston 1974). Prior to 1956, over twenty-five hundred studies had been conducted on interpersonal attraction (Newcombe 1956). The number initiated since that time can only be estimated.

Recently, counseling researchers have begun to consider the importance of physical and social attractiveness in the counseling process (Barocas and Vance 1974; Carter 1978; Cash and Kehr 1978; Cash and Salzbach 1978; Davis, Cook, Jennings and Heck 1977; Goldstein 1971; and Lewis and Walsh 1978). The rationale is that counselor attractiveness offers the counselor leverage in changing clients' attitudes about themselves and the world around them (Krumboltz, Becker-Haven and Burnett 1978; Schmidt and Strong 1971; Strong and Dixon 1971; and Strong 1968).

Similarity as a form of interpersonal attraction has also been noted as a potentially important aspect of the counseling process.

Byrne wrote:

Anytime another person offers us validation by indicating that his percepts and concepts are congruent with others, it constitutes a rewarding interaction and hence, one element in forming a positive relationship. (Byrne, 1961, p. 713).



Newcombe noted that:

the possession of similar characteristics predisposes individuals to be attracted to each other to the degree that those characteristics are both observable and valued by those who observe them. (Newcombe, 1956, p. 577).

In addition, the theoretical explanations of why attraction occurs are varied. The concept of "exchange theory" seems particularly salient, however, when one considers similarity as it applies to counseling research. Huston (1974) stated that "exchange theory" is based on the principle that

social transactions are regulated by the interactants desire to derive maximum pleasure and minimum pain from others. More formally, exchange theory suggests that individuals are more attracted to persons who provide the highest ratio of rewards to costs (p. 20).

To further expand on this concept it would be beneficial to consider that

according to exchange theory similarity should lead to attraction or other positive experiences in the therapeutic relationship if the similarity is experienced as a reward (Ross, 1977, p. 700).

Consequently, the rationale for investigating similarity as a basis for therapeutic gain lies again in social psychological theory. Specifically, it seems logical to assume that a comparison might be drawn between a social friendship and a counseling relationship.

Fiedler (1951), for example, offers a solid basis for this interpretation. He asked both experienced and inexperienced therapists, who adhered to various theoretical orientations, to identify the ideal therapeutic relationship. The majority described it as nothing more

than a good interpersonal relationship. This contention was also held by other authors (Corrigan 1978; Reisman and Yamokoski 1974; and Schofield 1964). Fiedler's rationale for pursuing this concept was to support the notion that although therapists may operate from different theoretical orientations there are still some common elements in all therapeutic relationships. Thus, the stage was set for investigating the role of similarity as it might affect the counseling relationship, especially since early in the literature it was stated that similarity in such attributes as attitudes (Byrne 1961) and personality (Izard 1959) had a positive effect on the formation of friendships. Why shouldn't the same be true for these as well as many other factors that are inherent in the counseling relationship?

One of the first studies that considered the similarity relationship in counseling was done by Axelrod (1952). Assessing personality characteristics by means of the Rorschach test, he monitored progress in therapy. His conclusion was that among individual traits, ideation proved to be statistically significant. This affirmed the hypothesis that counselor-client similarity is positively related to the therapeutic progress.

Later, Tuma and Gustad (1957) tried to assess the impact that counselor-client personality similarity had on client learning. Results indicated that client learning in therapy was enhanced when the personality variables of dominance, social presence, and social participation were similar in counselor and client.

Gerler (1958) used the Ewing Personal Rating Form, and Schloper (1959) used Leary's Interpersonal Checklist to assess counselor-client personality similarity. Both authors then attempted to determine the effects of personality similarity on therapeutic outcome. The results of these two studies indicated that personality similarity could have positive effects. A moderate degree of similarity had a positive effect on outcome whereas a high degree of similarity was viewed as a negative aspect of the counseling relationship.

Three years later, Carson and Heine (1962) used the MMPI to isolate personality similarity. Patients and therapists were matched and therapeutic gain was assessed. The authors concluded that

success was found to vary significantly with similarity, the form of the relationship being curvilinear, in accord with the investigator's hypothesis that either extreme similarity or dissimilarity would impede the therapeutic process (p. 43).

Mendelsohn and his associates attempted to examine the effects of counselor-client similarity on the counseling process. The Myers-Briggs Type Indicator, a self-report personality inventory based on Jungian concepts was used to assess similarity patterns between counselors and clients. This inventory was designed initially for assessing an individual's preference for coming to conclusions, making judgements, and other similar needs.

Mendelsohn and Geller (1963) indicated that similarity in scores was related to a lengthier contact time between counselor and client. This was attributed to a strong feeling of commitment to the counseling process by both individuals because of a similar personality need.

In a follow-up study, Mendelsohn and Geller (1965) examined some additional factors relative to counselor-client similarity and found that there was a linear effect when it came to counseling duration, but this was not related to how clients judged their counselor's competency. The same effect held true for their degree of comfort or level of rapport. The resultant evaluations were the same as in Gerler (1958) and Schloper (1959) studies.

The third and concluding study (Mendelsohn 1966) was a replication and extension of the original study. This time the author's conclusion was that

clients' personality factors affect the decision to seek counseling, but independent of the counselor, it has little to do with continuation. Therefore, in light of this data, it is a tenable hypothesis that who the client is, is of less significance, than with whom the client is matched (Mendelsohn 1966, p. 235).

In summary, these three studies indicated that counselor-client matching is justified. Specifically, if the client is matched with a counselor who possesses a similar personality, the counseling process is more likely to continue. The client will have a greater degree of comfort and rapport with the counselor, and the eventual outcome of the counseling process will be viewed as positive by the client. Similar personality traits, however, did not seem to effect the client's view of counselor competency.

Cook (1966) initiated a project that falls under the social psychological model when he considered value similarities of counselor and client and their effect on counseling outcome. Assessing counselor-client

values with the Study of Values Inventory, counselors and clients met for two to five interviews. Cook then determined positive feelings toward the counseling process. At this time he noted that a medium degree of counselor-client value similarity was more directly related to positive outcome than if similarity had been low or high.

Using a two interview format, Herbert (1968) examined the counseling relationship as it was affected by personality and sex similarity. He determined personality similarity with the Edwards Personal Preference Scale and after the two interviews were conducted, assessed the counseling relationship with the Communication Rating Scale. Results indicated that male counselors were rated more positively by male clients than by female clients. In addition, male clients viewed the counseling relationship as more intense than did female clients.

Jones (1969) also used the two interview format but looked only at personality type as it related to counseling process and outcome. He, like Mendelsohn and his associates, used the Myers-Briggs Type Indicator to determine personality similarity. After the interviews, a Semantic Differential was used to measure counseling outcome. Conclusions reached were that there was no support for similarity in personality affecting either the counseling process or outcome. What did emerge, however, was an indication that high counselor-client personality similarity does produce an elevated self-concept in clients. It is interesting to note that the degree to which self concept was increased depended upon what the client's problem was. In terms of how the

counseling relationship was viewed by the therapists, personality similarity had little impact on the counselors, since they rated each condition approximately the same.

Concepts such as hot and cold may vary from one person to another. Hot to one person may be warm to another. Therefore, the more similar two people are in terms of how they differentiate between such things may contribute to the type of interpersonal relationships developed. This was Carr's (1970) contention when he paired fourth year medical students with psychiatric patients in an attempt to determine the effects of similar conceptual levels on perceived therapeutic outcome. Initially, he administered the Interpersonal Discrimination Scale to therapists and patients prior to therapy. The test (IDS) was administered again after the twelfth week of therapy. Each time, the intent was to determine how therapists and patients differentiate on an interpersonal level. Then differences in differentiation scores and perceptions of successful therapeutic outcome were compared. Results indicated that successful therapy outcome

as perceived by the patient requires not only the sharing of a number of semantically common conceptual dimensions by which experiences are construed, but also some degree of functional mutuality in the extent to which various stimulus objects are differentiated along these dimensions (Carr 1970, p. 364).

Knowing that the effects of accurate empathy on the counseling process were documented, Parsons (1977) attempted to determine whether matching counselors and clients by conceptual levels would increase

perceived counselor empathy. The Paragraph Completion Test was used for assessing counselor-client conceptual level, and a modified form of the Barrett-Lennard Relationship Inventory was used to measure perceived empathy. The results indicated that while similar conceptual level did not affect perceived counselor empathy, the length of counselor experience did.

Noting an abundance of artificial situations in attraction research, Cheney (1975) attempted to use actual counseling instances in determining the effects of counselor-client similarity and the importance of interest in social issues on attraction. His main criticism of the existing research was that previous studies had offered subjects the completed attitude questionnaires of unseen strangers, which had been manufactured by the researchers, and asked to indicate their preference for these people. In addition, most studies failed to differentiate the importance of the topics on which attitude similarity was assessed. Cheney (1975) used actual counseling interviews for his study. He wanted to determine whether the importance of the topic discussed had any effect on counselor attractiveness. Subjects were incarcerated alcoholics, and the topics discussed were either alcohol or non-alcohol related. His results indicated that counselor attractiveness increased when the topic discussed was of high importance to the client rather than if the counselor has a similar attitude about the topic.

Conversely, Beutler et al. (1975) suggested that initial counselor-client dissimilarity would provide a greater effect on interpersonal

influence than would initial counselor-client similarity. Measuring attitude similarity and change with the Situational Appraisal Inventory, this group of researchers randomly paired ninety-seven psychiatric patients with six therapists. Groups were divided into high, medium, or low similarity and again sub-divided into high and low perceived therapist credibility, which was assessed with a Semantic Differential Scale. Interpersonal influence was assessed at the end of therapy and a significant similarity effect indicated that, initially, low similarity produced greater therapist influence. The credibility of the therapist, however, did not significantly effect attitude change.

At the initial counseling interview, clients acquire a first impression of their counselor which can be crucial to the eventual outcome of the entire process. Spiegel (1975) felt that

the more qualified the client believes the counselor to be, the greater the probability that the client will perceive the counselor's behavior as helpful. Thus, both expertness and similarity may augment a client's perception of the counselor's competence (Spiegel 1975, p. 437).

Using a 2x2x2 design, she attempted to determine counselor competence with high and low levels of expertness, similarity, and two presenting problems. The results demonstrated that expertness was far more facilitative in projecting counselor competence than was similarity. Thus, as far as the client is concerned when a counselor acts ambiguously, it is the expert counselor who is more aware of what he is doing.

Holland (1973) suggested that matching counselors and clients on both vocational and personality characteristics would facilitate



the counseling process. Subjects who had taken the Vocational Preference Inventory (VPI) were exposed to a series of audiotapes by Cox and Thoreson (1977). These tapes were developed to emphasize different occupational characteristics which Holland had attributed to each vocational type. For example, the conventional tape stressed salary, career prestige, and adherence to social norms, characteristics which were viewed as consistently compatible with this career personality type. The tapes for other types were constructed in a similar manner. Subjects were then asked to select the counselor they preferred. Results showed that subjects selected a similar counselor more often, but it was even more evident for those subjects who were identified as Artistic, Social, and Enterprising. Random preference for a counselor was more notable for Realistic and Conventional types, and preference for a dissimilar counselor was often noted for the Investigative type subject.

Martin (1978) used group counseling sessions with theoretical models of Rational-Emotive Therapy, Psychodrama, and Behavior Modification, to investigate the effects of counselor-client value congruence on ratings of client improvement. An association was found to be evident between value similarity of counselor and clients. When theoretical orientations were examined, however, value congruence had no effect on the behavior modification group, and it was concluded that value similarity was important only under theoretical conditions that stress relationship building as a part of the therapeutic endeavor.

Research studies on the effects of counselor-client similarity during the counseling process and on counseling outcome have been diverse, creative, and inconclusive. The first review of the literature on this topic was done by Meltzoff and Kornreich (1970). They felt that the existing studies had offered negligible results. Ross (1977) felt that the additional research had little more to contribute because:

1) Past research may have measured similarity of the counselor and client on variables which had little or no importance to either party, or these variables may not have been perceived by the clients. Studies conducted in the future should attempt to consider variables directly relevant to the therapeutic relationship.

2) Some similarity variables may hold a greater degree of importance for some clients than others.

Unless researchers consider the implications of specific variables they will most likely continue to obtain inconsistent or weak findings since for some clients a similarity on one variable may have positive implications while for others the same measure may have negative implications, and the overall findings from a study with such subjects would yield confused effects (Ross 1977, p. 703).

3) More consistent findings related to attraction research in counseling may be obtained if factors such as rapport and empathy were examined rather than counseling outcome, thus enabling researchers to determine the effects of similarity in different stages of the counseling process.

These same concerns, as well as others, were held by other authors not only in relationship to similarity research but the the social

psychological model as well. Basically, research related to these areas has focused on the reputed qualities of the counselor rather than on what the counselor actually does during the process (Johnson and Matross 1977).

#### Language use as a form of attraction

An active ingredient intrinsic to the counseling process is language. Of all the variables examined in relationship to attraction, it has received the least amount of research attention (Altman 1974). Additionally, few studies have focused on language use similarity. Perhaps this is because the analysis of language and the categorization of it in counseling has been inconsistent (Russell and Stiles 1979).

The first study related to similarity of language use in counseling appeared in recent literature. Patton et al. (1977) supported the concept of natural language analysis and preliminary data showed a pattern with substance in the classification of language use in therapy. Using the verb in each sentence as a main focal point in their study, they examined some actual counseling interviews. The purpose of concentrating on the verb was based on the assumption that it is

conceptualized as a kind of interpretive relator, which specifies how named things are to be coupled by listeners. The verb is assumed to control the identity or case assignment and the number of nouns that can have a role in the propositional core of the utterance. Thus, the verb helps display for the listener, how the speaker intends the named things he mentions to be interpreted (Patton et al. 1977, p. 29).

Though these authors agreed with the concept of examining the similarity patterns of verb usage by counselor and client, their method of classifying or identifying verbs was different from that of Bandler and Grinder (1975). Rather than viewing verbs in relationship to modes of sensation, this group classified verbs by their stature in the sentence. Thus, any form of the verb "to be" was designated as being stative, verbs which expressed feelings were labelled "experiencer", and possessive verbs were denoted as "benefactive". All other verbs were classified as "agentive" verbs. The preliminary results of this study showed that across the first, eleventh, and twenty-fifth interviews both the counselor and the client showed an increased usage of stative ("to be") verbs and a decreased use of agentive (all other) verbs. Additionally, by the eleventh interview there was an indication that the use of experiencer (expression of feelings) verbs had dropped off and then returned to the same frequency that was evident in the first interview. Stative (to be) and agentive (all other) verbs made up 70% of all the verbs used.

In a follow-up study, Bieber et al. (1977) used the same classification system of stative, experiencer, agentive, and benefactive for verb usage. Again, they looked at the first, eleventh, and twenty-fifth interviews and analyzed the verbs in use. In relationship to similarity, they assumed that the general direction of the types of verbs used by both counselors and clients would be similar across interviews. Though this did occur, it was not immediate. Initially, the client in this

particular study used two verb types while the counselor employed two additional ones. However, as counseling progressed,

both counselor and client were moving in concert, with a decreased use of stative verbs and a corresponding increase in agentive verbs. And then they both reversed this trend by moving together in the opposite direction for these two verb types by the end of the interview (Bieber et al. 1977, p. 267).

This may suggest that the client eventually perceives the counselor in the form of a teacher, instructing him or her in the treatment plan of counseling.

#### Summary

In summary, the area of counselor-client similarity has received very little validation. In the area of language use, however, similarity research is almost non-existent. Consequently, when one considers the language use model proposed by (Bandler and Grinder 1975; and Grinder and Bandler 1977) it seems not only appropriate, but applicable, to the similarity model, especially since the initial contention was that if the counselor used similar modality verbs similar to those the client employed, the counselor would be viewed in a more positive manner. Additionally, language use is an active ingredient in the counselor's behavior. Addressing the question of language use in the counseling process confronts some of the major criticisms that have been directed at similarity research and further research may enhance an area of counseling that has been neglected.

## METHODOLOGY

### Purpose of the Study

The purpose of this study was to determine whether similar counselor-client sense modality preference would enhance the client's attraction for the counselor. Subjects in this study were asked to listen to a series of tape recorded words and to respond to each word. Each recording consisted of three sets of predicates with each set being identified as either visual, auditory, or kinesthetic.

The subjects' sense modality preference was assessed prior to their listening to these recordings by using three methods: a sense modality preference interview, a sense modality preference inventory, and a self-report indication of sense preference. Counselor attractiveness was assessed by two methods after the subjects had listened to the tape recordings. The first was a standard measure of attraction, while the second was the subject's self-report indication of counselor preference.

The procedures used during this study included sample selection, instrumentation, collection of data, experimental design, and statistical procedures and models. These procedures are discussed in the following pages.

### Sample Selection

The subjects for this study were 179 undergraduate students enrolled in introductory psychology classes at Texas A&M University. For participating in this study, subjects received experimental credit, which was applied to their final grade.

Of the initial sample of 179 subjects, 162 participated in the entire experiment. Subjects were between the ages of eighteen and twenty-five, enrolled in various disciplines, and pursuing a bachelor's degree at Texas A&M. Subjects were limited to white males and white females since it was beyond the scope of this study to investigate ethnic and cultural differences in relationships to sense modality preference.

### Instrumentation

Three areas of instrumentation were necessary. Initially, each subject's sense modality preference was assessed. This was accomplished by a sense modality preference interview, a sense modality preference inventory, and a self-report indication of sense preference.

For the second phase of the study, it was necessary to construct a stimulus that would act as a means of developing a social impression of each counselor in the study. In addition, a standard measure was administered that assessed each subject's social attraction for the various counselors.

## Assessment of Predicate Preference

### Predicate preference interview

The Bandler and Grinder (1975) model suggested that individuals gather most of the information they need about the environment primarily through the senses of sight, sound, and touch. This information, when related to other individuals, is done by language. The researchers contended that each person uses one of these three senses more often than the other two when gathering environmental information.

The sense which is used most often can be determined by examining the person's natural language. Such an analysis was proposed by Grinder and Bandler (1977).

In order to identify which of the representational (sense) systems the individual prefers most, the therapist needs only to pay attention to the predicates which the client uses to describe his experiences. In describing his experiences, the client makes choices (usually unconsciously) about which words best represent his experience. Among these are a special set called predicates. Predicates are words used to describe portions of a person's experience which correspond to the process and relationships in that experience. Predicates appear as verbs, adjectives, and adverbs in the sentences which the client uses to describe his experiences (Grinder and Bandler 1977, p. 9).

The Bandler and Grinder (1975) model of sense modality preference, however, is a relatively new concept in counseling research and has received very little empirical attention (Goleman 1979).

To be thorough in the identification of each subject's sense modality preference, a paper and pencil inventory and self-report



indication of sense preference were also utilized. The assumption was that these measures would not only add support to the interview method but would also aid in the exploration of alternative methods of determining sense modality preference.

Attempts to select an appropriate instrument that would determine sense modality preference or act as a reliable instrument in assessing visual, auditory, or kinesthetic dependence failed since no standard measure was available (Buros 1978). To facilitate the progress of this study, the development of some type of measure for assessing sense modality preference was undertaken. The result was a paper and pencil instrument known as the Sense Modality Preference Inventory (SMPI) which was developed by the author. The assumption in developing such an instrument was that it would assist the researcher in classifying subjects on the basis of their sense modality preference.

#### Six column method

The six column method (Appendix A) was the initial design used to elicit sense modality preference. Twenty-seven of the fifty-four words contained in the inventory were taken from the Bandler and Grinder (1975) text. Each word was identified by the authors as being either a visual, auditory, or kinesthetic predicate. Twenty-seven additional words were included in the instrument on the basis of their analogous potential for eliciting sense modality preference and their similarity to the original twenty-seven words.

Examples of this would be:

<u>Text words</u>	<u>Similar type words</u>	<u>Category</u>
purple	green	visual
hear	heard	auditory
feel	touch	kinesthetic

The twenty-seven predicates from the text were assembled into three columns of nine words each. Each column contained three predicates that were either visual, auditory, or kinesthetic and the same was done with the twenty-seven similar words. Thus, the inventory contained a total of six columns with nine words in each. Positions of the words and the ordering of the columns were determined randomly. Individuals taking the inventory were instructed to circle three words in each column that appealed to them the most. Therefore, each subject was to circle eighteen words. The subjects for this analysis were fifty-two undergraduate students enrolled in an introductory psychology class at Texas A&M. There were twenty-six males and twenty-six females, all of whom were Caucasian since this study would not be considering ethnic and cultural differences in the area of sense modality preference. Analysis of the six column method was done on the basis of the number of predicates each subject selected in each category. Therefore, subjects were classified as either visual, auditory, or kinesthetic on the basis of having selected a certain type of predicate over the other two types. No consideration for degree of preference was given primarily because the distribution of subjects which would occur was not known. Consequently, a subject could be classified as having

visual preference on the basis of having selected one more or six more visual predicates.

The following examples illustrate this procedure:

Subject	Visual	Auditory	Kinesthetic	Classification
1	7	6	5	Visual
2	7	7	4	Neutral
3	10	4	2	Visual

Subsequently, if the subject selected one more or seven more visual predicates, he or she was still classified as visual.

Chart A and Graph A (Six Column Method, Appendix A) shows a fairly even split for the visual and auditory groups whereas a 2 to 1 ratio existed with the kinesthetic group when compared with the first two. The distribution in terms of sex was equal throughout the three categories as well as indicating that sense modality preference according to this method is not biased in terms of sex of subjects.

A split half reliability check was done on all subjects for each category to determine the consistency with which the kinds of words were selected within the instrument itself. An examination of these results on Chart B (Six Column Method, Appendix A) reveal an inadequacy on the part of the instrument. Thus, it was decided that perhaps the variety of choice was too broad and that more structure should be presented to the subjects in terms of them making selections among the various words. Subsequently, the forced choice method was used in an attempt to give the instrument greater reliability and

consistency in the classification of a subject's sense modality preference.

#### Forced choice method

The forced choice method consisted of taking fifty-four predicates and arranging eighteen sets of three words (Forced Choice Method, Appendix A). Each set contained a visual, auditory, and a kinesthetic word. The order of presentation in each set varied throughout so that no obvious pattern of presentation emerged.

Subjects for this form were fifty undergraduate students from an introductory psychology class at Texas A&M University. Again, the group was divided evenly relative to male and female subjects. All subjects were Caucasian since this study was not concerned with sense modality preference as it affects ethnic and cultural differences. Results for this form of the instrument revealed a greater difference in the classification of subjects, but the results for the sexes remained the same as the six column method as is indicated by Graph A (Forced Choice Method, Appendix A). Additionally, the distribution of scores in terms of the Plus number score, derived by determining how many more of the preferred type predicates the subject selected over the next highest category seemed to be an either/or type situation since Graph B (Forced Choice Method, Appendix A) shows a bimodal distribution on both sides of plus 4.

The overall split half reliability coefficients also proved to be as consistent in this method as in the six column method with the

exception of the visual category. Neutral classifications also occurred as often.

It seemed that perhaps the forced choice method had some credibility but that the triads of words might be unequal. The types of words were sufficient in eliciting responses, but when one compared certain visual, auditory, or kinesthetic words, a subject who may have a preference for visual words would select auditory words primarily because of the descriptive appeal. In other words given the predicates:

quiet      crawl      purple

the word "quiet" may indeed have the greatest appeal for all subjects due to its descriptive qualities. Therefore, the subject may choose it not because of its V-A-K quality but because it is a more powerfully appealing word than its counterparts in a given triad. The number of times each word in the forced choice version of the inventory was selected by this sample was tabulated to determine which words had the greatest appeal. The results tabulated in Appendix A (Predicate Selection) indicated that some words (i.e. "clearly" was selected by all but two of the subjects) did indeed have more appeal than others.

In order to equalize this, results were tabulated and the words in each category were ranked. Then taking the first word in each category according to rank order, new triads were formed and the Revised Choice Form of the SMPI was constructed.

Revised forced choice method

Format and instructions for the RFC (Appendix A) were identical to that of the original forced choice method but the specific words contained in each individual set were selected on the basis of the rank order appeal.

Subjects for this form were fifty undergraduate students from an introductory psychology class at Texas A&M University. Again, this group was divided evenly relative to male and female subjects. All subjects were Caucasian since the study was not concerned with sense modality preference as it affects ethnic and cultural differences.

Results of this inventory are contained in Appendix A under the Revised Forced Choice method graph. In terms of distribution, this form provided results that were more useful in classifying subjects in terms of sense modality preference. Results of the split half reliability analysis were similar to the results obtained on the two previous forms of this instrument. Therefore, little is offered by this form in terms of the reliability with which subjects selected predicates, as was the case with the two previous forms.

In summary then, the revisions offered little in terms of reliability and the distribution of scores. What the Revised Force Choice method has offered, however, is the assurance that predicates are being selected on the basis of their sense preference rather than their descriptive appeal, and that the variation in choice among predicates has been reduced for each subject.

Further development of the instrument may improve reliability. In the Revised Forced Choice form, the SMPI should prove to be satisfactory in classifying subjects and as an alternative method of eliciting sense modality preference from subjects.

#### Self-report indication of sense preference

As an additional means of determining sense modality preference, a self-report measure was solicited from each subject. The assumption was that a person's indication of the sense that enables them to gather the most information about the world around them would assist the researcher in determining which predicates to use most often.

#### Comparison of three methods of sense modality preference

In order to determine each subject's sense modality preference, three methods were utilized: a sense modality preference interview, a sense modality preference inventory, and a self-report indication of sense modality preference.

When the rating procedure described by Tinsley and Weiss (1975) was applied to these three methods of sense modality preference, very little agreement resulted. Specifically, the rate of agreement coefficients were as follows: sense modality preference interview and sense modality preference inventory, .12; sense modality preference interview and self-report indication of sense modality preference, .09; and sense modality preference inventory and self report indication of sense modality preference, .16.

Since these results have a significant bearing on the organization of subjects in terms of their attraction scores, this will be discussed at length in the statistical analysis section. The distribution of subjects in any one category visual, auditory, or kinesthetic became disproportionate depending upon the method used. Therefore, the original plan of having sixty subjects in each category could not be continued.

#### Counselor language use

Audio tape recordings were developed as a means of providing an impression of a counselor. Six individual cassette audio tapes were made with the aid of three white males and three white females who posed as counseling psychologists. Each volunteer read aloud three sets of twenty words. Each set consisted of 15 sense modality predicates and 5 fuzzy function words (Appendix C, Counselor Script).

The sense predicates were taken from the Grinder and Bandler (1977) text since they had been identified as being either visual, auditory, or kinesthetic predicates. Fuzzy function words as defined by Bandler and Grinder (1975) are words that do not fit into any one of these three groups. Thus, each volunteer counselor read aloud sixty words, with each set of twenty words being identified as either visual, auditory, or kinesthetic.

The tapes were recorded in a sound studio on the campus of Iowa State University by a technician from the Media Resource Center.



Each counselor volunteer read all three sets of words, with a three second pause between each individual word and a thirty second pause between each set of twenty words being identified as either visual, auditory, or kinesthetic.

The tapes were recorded in a sound studio on the campus of Iowa State University by a technician from the Media Resource Center. Each counselor volunteer read all three sets of words, with a three second pause between each individual word and a thirty second pause between each set. The recordings were made on reel to reel tape and later transferred to cassettes. The order of each tape assured randomness of presentation and consistency of exposure to each counselor's voice, since voice tone is a counselor quality that holds for any particular counselor with any particular client (Strahan and Zytowski 1976).

Tape I	Male	2V	3A	1K
Tape II	Male	2K	3V	1A
Tape III	Male	3K	1V	2A
Tape IV	Female	4V	5A	6K
Tape V	Female	6A	4K	5V
Tape VI	Female	5K	4A	6V

Audio recordings rather than video tapes were used so to control reaction to the physical appearance of a counselor. Previous research in the attractiveness literature has indicated that counselor appearance does indeed affect the ratings of subjects (Cash, et al. 1975).

### Assessment of Attraction

Counselor attractiveness was assessed through the use of an adjusted form (Appendix D) of the Interpersonal Judgement Scale (Byrne 1971). Two underlying assumptions exist in this instrument as well as with other instruments that assess attractiveness. The first is that the operation used to assess attraction defines it. Consequently, the closer subjects make their mark to either end of an attraction scale, the more they are exhibiting their like-dislike for the variable under investigation. Second, it is assumed that attraction is a response which has meaning that is derived from other variables and therefore it is able to stand alone (Huston 1974). Research on the Interpersonal Judgement Scale is abundant since it is the most widely used and empirically stable measure of attraction available (Byrne and Griffitt 1973).

#### Self-report indication of counselor preference

For completeness in the assessment of counselor attractiveness, subjects were asked for a self-report indication of counselor preference. This was obtained in the form of rank order with 1 being most preferred and 3 being least preferred.

### Data Collection Procedure

In order to complete this study, all subjects were asked to participate in five data collection procedures. They were: sense

modality preference interview, a sense modality preference inventory, a self-report indication of sense preference, a standard measure of social attraction, and a self-report indication of counselor preference.

These five procedures were during two sessions. Initially, the sense modality preference interview, the sense modality preference inventory, and the self-report indication of sense preference were conducted. On the basis of the results of these procedures, subjects were randomly assigned to one of six groups, depending upon each person's sense modality preference.

After subjects were assigned to a group, the standard measure of social attraction and a self-report indication of counselor preference were administered in conjunction with the stimulus. First, upon hearing a series of three tape recordings subjects were asked to the attraction scale after each recording. After listening to all three recordings, subjects were asked to give a self-report indication of preference for all three counselors. Each of these procedures was conducted according to a specific format which is discussed in the following sections.

#### Sense modality preference interview

The Bandler and Grinder model (1975) suggested that an individual gathers most of the information he needs about the environment around him primarily through the senses of sight, sound, and touch. This information, when related to other individuals, is transferred through

natural language. Yet, it was the researchers' contention that each person uses one of these three senses more often than the other two when gathering information. The sense which is used most often can be determined readily by examining the person's natural language. Such an analysis was proposed by Grinder and Bandler (1977).

In order to identify which of the representational (sense) systems the individual prefers most, the therapist needs only to pay attention to the predicates which the client uses to describe his experiences. In describing his experiences, the client makes choices (usually unconsciously) about which words best represent his experience. Among these are a special set called predicates. Predicates are words used to describe portions of a person's experience which correspond to the process and relationships in that experience. Predicates appear as verbs, adjectives, and adverbs in the sentences which the client uses to describe his experience (Grinder and Bandler 1977, p. 9).

In order to ascertain each subject's sense modality preference through natural language, a personal interview was conducted with each subject. A convenient time was agreed upon and each subject met with the researcher in his office at the Personal Counseling Service of Texas A&M University. Seated across from the researcher, each subject was asked for preliminary information (name, I.D. number, etc.) and then the following statements were read to help the subject relax and focus on themselves:

"I am going to read a set of instructions to you. We will begin the interview after they have been completed. Right now I would like you to sit back in your chair, close your eyes, and make yourself as comfortable and relaxed as possible. Take a deep breath now and hold it to the count of eight and let it out to the count of six. Breath in; one-two-three-four-five-six-seven-eight. Exhale one-two-three-four-five-six-seven-eight. Now inhale one-two-three-four-five-six-seven-eight. Now exhale one-two-three-four-five-six-seven-eight.

"Many people experience things in many different ways. You will find that you can experience an image in your own particular way. I am going to ask you to experience an image. I would like to have you tell me in detail what it is that you are experiencing through this image once it comes to mind. If at any time you are unable to further experience the image, raise the index finger on your right hand and I will give you another image to experience. The image you can feel free to experience now is that of a . . . ."

Each subject was given a minimum of three images to experience. However, some subjects found it difficult to respond to one or more of the first three and they were given additional images in which to experience. The list of six images were: an ocean or lakeside, a car accident, a mountain setting, an amusement park, a football game, and an airport.

The first three images were presented to each subject in the above order. Any subject who experienced difficulty in responding to one of these three images was given the additional number needed in order to have responded to three images. The additional images were given in the above order as well.

The responses of each subject were tape recorded on standard cassette tapes with a Wallensak tape recorder. A typical response to an image was:

"Fishing when the sun is coming up on the lake. Grass is all smooth and the trees are swaying in the cool morning breeze. The water is calm and peaceful. I can hear the cry of birds in the distance."

The predicate content (verbs, adjectives, and adverbs) of each interview was then assessed by three trained raters. These three

raters were white male staff members with the Personal Counseling Service at Texas A&M University. Each person had a Ph.D. degree in Counseling Psychology and was selected to participate in the experiment on the basis of his familiarity with the Bandler and Grinder model (though none of them had ever received formal training in the area), their willingness to participate in the experiment, and their cooperativeness in completing this project.

Raters were introduced to the purpose of the experiment and their task, received instructions in the assessment of sense modality preference categorization (Appendix E, training manual), and were given a number of samples with which to work.

Copies of all tape recorded interviews were made and given to each rater. They were instructed to listen to each interview and assign the subject an overall sense modality preference rating of either visual, auditory, or kinesthetic.

Interrater reliability coefficients for the sense modality preference interviews were A) .75 between raters 1 and 2 B) .98 between raters 1 and 3, and C) .60 between raters 2 and 3. The two judge rating procedure described by Tinsley and Weiss (1975) was used to obtain these coefficients, which were high and indicated a very satisfactory rate of agreement.

#### Sense modality preference inventory

The Sense Modality Preference Inventory (SMPI) (Appendix F) was administered to experimental subjects after the sense modality

preference interview was conducted. (The development of this instrument is covered extensively in the instrumentation section of this chapter.) The SMPI contains eighteen items. Each item consists of three predicates, one visual, one auditory, and one kinesthetic. Subjects were instructed to select one of the three words in each set and circle it. An individual's score was determined by summing the number of each type of predicates selected. Sense modality preference was then determined by the number of predicates selected most often.

#### Self-report indication of sense preference

As a third means of determining sense modality preference, a self-report measure was solicited from each subject. The assumption was that an individual's indication of which sense allows them to gather the most information about the world around them would assist the researcher in determining which predicates subjects use most often in their natural language.

The following instructions were read to subjects after they had completed the SMPI.

"The experiment you are going to participate in will focus on language behavior. The assumption being that certain theories in psychology contend that language behavior is directly related to the way in which each person perceives the world around him."

"More specifically, each person learns about the world around him through the senses of sight, sound, and touch. We all depend upon one of these more than the other two. I would like you to write down on the bottom of your inventory sheet (SMPI) which of these senses you think you use most often to gather information about the world around you. Again,

considering the senses of sight, sound, and touch, which one do you feel you use most often to gather information about the world around you?"

Depending upon the results of each subject's responses to these three assessment procedures, they were then assigned to a group for participation in the second phase of this experiment. This consisted of exposure to the experimental stimulus, administration of the standard measure of social attraction, and a self-report of counselor preference by each subject.

#### Assessment of social attraction

Arrangements were made for a second meeting between the researcher and each subject. (This time subjects met with the researcher in groups of ten.) This second meeting was conducted in the group meeting room of the Personal Counseling Service of Texas A&M University. Well decorated, the room is comfortable and sound proofed against distracting outside noise.

On one side of the room, ten arm chairs were arranged in two rows of five. Directly across the room, facing the subjects, were two additional chairs. One was for the researcher and the other one for a Wallensak tape recorder. Approximately five minutes after the agreed upon meeting time, the subjects were seated, the door to the room was closed, and the experiment was initiated.

The following instructions were read:

"You have agreed to participate in a research project that has to do with language use. The technique that will be employed in this experiment is called free association.



Free association is a method used by psychologists where a single word is said to an individual. That person will in turn respond with the first word that comes to his mind. There are three sets of words that have been tape recorded. Each set contains twenty words, with a three second pause in between each word. You are asked to listen to each word. Once you have heard the word, write down the first word that comes into your mind in the appropriate place on your response sheet (Appendix G)."

"After each set of twenty words, you will answer the six questions on the next page about the person you have just heard on the tape. You should be aware that each person on these tapes is a Ph.D. level Counseling Psychologist. He or she has worked for a minimum of five years in a university counseling center, counseling students who have had personal or career concerns."

"For your information, if you miss a word, or do not understand one, just wait for the next one. Additionally, you should know that if you are unable to think of a response to one or more of the words you may leave the space blank."

(Author's note: The original plan for this study was to have each subject listen to six recordings; one from each category visual, auditory; and kinesthetic, with a male and a female counselor. Previous pilot studies, however, indicated that the subjects fatigued after three recordings. Therefore, the technique of free association was employed for methodological rather than theoretical purposes. It was hoped that participation in the free association mode would not only give the experiment greater semblance to psychological research but would also enhance each subject's participation in the experiment by motivating him to listen to each tape carefully.)

#### Assessment of subject's self-report preference for a counselor

When the subjects had listened to all three recordings and had completed an Interpersonal Judgement Scale (Appendix D), the second part of this phase of the experiment was initiated. The following instructions were read:

"You will notice that on the bottom right hand side of the first sheet of your answer packet are the letters A, B, and C. Next to each is a blank space. Now, in reference to the three counselors you just heard on this tape recording, I want you to consider the first counselor as person A, the second as person B, and the third as person C. Now, put the number one next to the letter of the person you liked the best and the number three next to the person you liked the least. The number two should go next to the remaining letter."

The purpose of this procedure was to gain further data on the subjects' preference for each counselor.

#### Organization of the Data

Five sets of data were obtained from the subjects in this study: sense modality preference by means of a sense modality preference interview, sense modality preference by means of a paper and pencil inventory, and sense modality preference by means of a self-report from each subject, an assessment of counselor attractiveness by means of a paper and pencil inventory, and a self-report indication of counselor attractiveness.

For purposes of analysis this information was put into form appropriate for computer use. Thus, the following information addresses the methods used in putting this data into the proper form.

#### Organization of sense modality preference data

In order to make random assignments to the various groups, each subject's sense modality preference had to be identified. Procedures for these three methods: sense modality preference interview, sense modality preference inventory, and the self-report indication of

sense modality preference are discussed elsewhere in this report.

Initially, the intent was to make random assignments to treatment groups on the basis of all three methods. The rate of agreement among all three methods proved to be low, however, and therefore unreliable as a source of assignment to a treatment group. Therefore, it was considered more appropriate to develop three sets of data using each subject's three sense modality preference results.

In other words, the initial design of the experiment was retained, but three separate sets of attraction scores were constructed on the basis of each sense modality identification procedure. Consequently, subject A retains his initial attraction scores for each of the three counselors, yet in data set one he may be identified as visual sense modality preference, in data set two he may be identified as auditory sense modality preference, and in data set three, he may be identified as kinesthetic sense modality preference.

For completeness, a fourth data set was constructed. This set was developed on the basis of two thirds rate of agreement on any of the original three sense modality preference methods. The assumption was that even though the three methods lacked in overall agreement, two of any of the three may have identified the individual's actual sense modality preference.

#### Assessment of attraction

Two individual methods of assessing counselor attraction were used in this study: the Interpersonal Judgement Scale and a self-report

indication of counselor preference. The adjusted form of the Interpersonal Judgement Scale elicited numerical attraction scores that ranged from 7 (least attractive) to 42 (most attractive). The self-report indication of counselor preference scores were ranked from 1 (most attractive) to 3 (least attractive). These scores were transformed and ratings of agreement were determined (Appendix H). Since these coefficients were sufficient in their agreement, the original Interpersonal Judgement Scale numerical attraction scores were retained for analysis of the data.

#### Group assignments

Subjects were randomly assigned to treatment groups on the basis of their sense modality preference and the method used to identify this preference. Originally, the intention was to have an even number of subjects in each of the six groups, but this was impossible because subjects were identified as different in sense modality preference depending upon the method used for categorization. Therefore, when it was possible, an even number of male and female subjects were assigned to all six treatment groups. Yet, this occurred only when the SMPI and self-report identification methods were employed. When the interview methods and two-thirds agreement method were used, only four treatment groups were available. This is because the latter two methods failed to identify a sufficient number of subjects with auditory sense preference.

### Experimental Design

The split plot design with repeated measures on subjects is an extension of the randomized block design in achieving subject homogeneity where there are two or more treatment levels (Kirk 1968). It was for this reason that this design was selected for use in the experiment.

A 2x3x3 split plot design was utilized in the experiment to determine whether the treatment variables of client sex (male and female), client sense modality preference (visual, auditory, or kinesthetic), and counselor sense modality would have any effects on the dependent variable of counselor attractiveness.

Since homogeneity among subjects was achieved with the split plot design by matching subjects with themselves (Kirk 1968) no control group was used in this study. Additionally, where it was appropriate, the treatment level of client sense modality preference was reduced to two levels (visual and kinesthetic).

### Statistical Approach and Model

Analysis of variance was the statistical procedure applied to the data in this study. The purpose was to determine whether subjects perceived counselors to be significantly more attractive due to the variables of client sex, client sense modality preference, or counselor sense modality. The statistical model used was the one set forth by Kirk (1968) in an attempt to test hypotheses 1A through 3D. The model is as follows:

$$X_{ijkl} = u + A_i + B_j + C_k + AB_{ij} + AC_{ik} + BC_{jk} + ABC_{ijk} + E_{ijkl}$$

$X_{ijkl}$  = average counselor attractiveness score

$u$  = grand mean

$A_i$  = client sex

$B_j$  = client sense modality preference

$C_k$  = counselor sense modality

$AC_{ik}$  = interaction of client sex and counselor sense modality

$BC_{jk}$  = interaction of client sense modality preference and  
counselor sense modality

$ABC_{ijk}$  = interaction of client sex and client sense modality  
preference and counselor sense modality

$E_{ijkl}$  = error term

The computer program used to solve the analysis of variance was the Statistical Package for the Social Sciences (SPSS) program in operation at the Texas A&M University Computer Center.

## FINDINGS

This study was designed to determine whether similar counselor-client sense modality preference would enhance client's ratings of counselor attractiveness. Three sense modalities were considered in the study: visual, auditory, and kinesthetic. Identification of each subject's sense modality preference was assessed with three measures: a sense modality preference interview, a sense modality preference inventory, and a self-report indication of sense modality preference. The stimulus for the experiment was a series of six tape recordings. Each recording contained one of three types of sense modality predicates presented by either a male or female counselor. Assessment of counselor attraction was determined by means of the Interpersonal Judgement Scale (Byrne 1971) and a self-report measure.

The research problem developed for this study was: to determine whether similar sense modality preference and gender would enhance client's ratings of counselor attractiveness.

The remainder of this chapter focuses on the findings. The results will be presented by stating each major and all appropriate minor hypotheses and the results of each analysis under the specific method of identifying sense modality preference utilized. Statistical tables for all analyses are all in Appendix I.

### Research Problem 1

To determine if there are any differences in perceived counselor attractiveness due to the sense modality preference of the client.

This research problem was examined by an analysis of variance. With the exception of two minor hypothesis under the interview assessment procedure, there was a lack of evidence to reject any of the null hypotheses at the .05 level of significance. Mean comparisons under the interview procedure by way of the Scheffs' test indicated that visual subjects perceived visual and kinesthetic counselors to be more attractive than kinesthetic subjects did.

Table I summarizes the hypotheses examined under research problem 1.

#### Research Problem 2

To determine if there are any differences in perceived counselor attractiveness by subjects due to the sense modality of the counselor.

This research problem was examined by an analysis of variance. There was a lack of evidence to reject any of the six null hypotheses at the .05 level of significance. Thus, counselors were not rated as any more attractive due to their own sense modality preference. Table 2 summarizes the hypotheses examined under research problem 2.

#### Research Problem 3

To determine if there are any differences in perceived counselor attractiveness due to subject gender.

This research problem was examined by an analysis of variance. There was a lack of evidence to reject any of the four null hypotheses at the .05 level. Thus, counselors were not perceived to be any more or less attractive because of the subject's gender. Table 3 summarizes the hypotheses examined under research problem 3.



Table 1. Summary of hypotheses examined under research problem one according to method used to identify subject sense modality preference.

Hypothesis	Interview	Inventory	Self-Report	Two-Thirds
There will be no significant differences in the ratings of male counselor attractiveness by visual subjects.	s*	n.s. <sup>a</sup>	n.s.	n.s.
There will be no significant differences in the ratings of male counselor attractiveness by auditory subjects.	e <sup>b</sup>	n.s.	n.s.	e
There will be no significant differences in the ratings of male counselor attractiveness by kinesthetic subjects.	n.s.	n.s.	n.s.	n.s.
There will be no significant differences in the ratings of female counselor attractiveness by visual subjects.	s*	n.s.	n.s.	n.s.
There will be no significant differences in the ratings of female counselor attractiveness by auditory subjects.	e	n.s.	n.s.	e

<sup>a</sup> non-significant at the .05 level  
<sup>b</sup> empty cell  
<sup>c</sup> significant at .05 level

Table 1  
(Contd.)

Hypothesis	Interview	Inventory	Self-Report	Two-Thirds
There will be no significant differences in the ratings of female counselor attractiveness by kinesthetic subjects.	n.s.	n.s.	n.s.	n.s.

Table 2. Summary of hypotheses examined under research problem two according to method used to identify subject sense modality preference.

Hypothesis	Interview	Inventory	Self-Report	Two-Thirds
There will be no significant differences in the ratings of male counselor attractiveness by subjects.	n.s. <sup>a</sup>	n.s.	n.s.	n.s.
There will be no significant differences in the ratings of male auditory counselor attractiveness by subjects.	n.s.	n.s.	n.s.	n.s.
There will be no significant differences in the ratings of male kinesthetic counselor attractiveness by subjects.	n.s.	n.s.	n.s.	n.s.
There will be no significant differences in the ratings of female visual counselor attractiveness by subjects.	n.s.	n.s.	n.s.	n.s.
There will be no significant differences in the ratings of female auditory counselor attractiveness.	n.s. <sup>1</sup>	n.s.	n.s.	n.s.

<sup>a</sup> non-significant at the .05 level

Table 2  
(Contd.)

Hypothesis	Interview	Inventory	Self-Report	Two-Thirds
There will be no significant differences in the ratings of female kinesthetic counselor attractiveness.	n.s.	n.s.	n.s.	n.s.

Table 3. Summary of hypotheses examined under research problem three according to method used to identify subject sense modality preference.

Hypothesis	Interview	Inventory	Self-Report	Two-Thirds
There will be no significant differences in the ratings of male counselor attractiveness by male subjects.	n.s. <sup>a</sup>	n.s.	n.s.	n.s.
There will be no significant differences in the ratings of male counselor attractiveness by female subjects.	n.s.	n.s.	n.s.	n.s.
There will be no significant differences in the ratings of female counselor attractiveness by male subjects.	n.s.	n.s.	n.s.	n.s.
There will be no significant differences in the ratings of female counselor attractiveness by female subjects.	n.s. <sup>1</sup>	n.s.	n.s.	n.s.

<sup>a</sup> non-significant at the .05 level

### Summary of Results

The purpose of this study was to determine whether counselor-client sense modality similarity would enhance the client's ratings of counselor attractiveness. Sixteen null hypotheses were formulated in order to investigate three major research questions. The statistical method of analysis of variance was used to examine the data in this study. With the exception of two minor hypotheses under the interview assessment procedure, all null hypotheses were supported, indicating that client's ratings of counselor attractiveness are not enhanced by scores for each method of sense modality identification and the appropriate analysis of variance tables can be found in Appendices I and J.

## SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to determine whether counselor-client sense modality similarity would enhance counselor attractiveness. Subject sense modality preference was assessed with three specific methods: a sense modality preference interview, a sense modality preference inventory, and a self-report indication of sense modality preference.

A series of tape recordings, each containing specific sense modality predicates, were developed to act as a stimulus for eliciting each subject's level of attraction for each counselor. Two measures were used to assess counselor attractiveness, these were the Interpersonal Judgement Scale (Byrne 1969) and a self-report indication of counselor preference.

The subjects who participated in this study were introductory psychology students at Texas A&M University. For their participation they received experimental credit, which was applied to their final grade in a psychology course.

Five sets of data were collected from each subject: sense modality preference by an interview, sense modality preference by an inventory, sense modality preference by self-report, assessment of counselor attractiveness by a standard measure (IJS) and a self-report indication of counselor preference. Statistical analysis of this data was done with analysis of variance.

### Summary

The intent of this study was to determine whether counselor-client sense modality similarity would enhance counselor attractiveness. Sixteen null hypotheses were formulated and tested and there was a lack of evidence to reject any of these. Consequently, there was no evidence to support this research question.

### Conclusions

Three methods of identifying subject sense modality preference were utilized in this study. The analysis of all hypotheses, using each method of identification, revealed that counselor-client sense modality similarity basically had no effect on the enhancement of counselor attractiveness. This result was unrelated to the careful consideration that was given to this topic.

The purpose of this discussion therefore is to consider the implications this study has on the existing literature in counseling psychology. Specifically in need of address are the areas of similarity as it relates to sense modality identification, preference, language use, and the theory of social psychological counseling.



### Similarity, language use, and sense modality

A careful examination of the literature on counselor-client similarity revealed that the variable under experimental consideration was, many times, a reputed quality. Too often, certain qualities, such as personality traits and attitude toward therapy were assessed for both the counselor and the client, with the client then being made aware of the counselor's qualities. Clients were then asked to rate their level of attraction for each counselor with this information as a basis.

Critics have stated that an examination of reputed counselor qualities rather than actual ones severely limits the applicability of analogue research to actual counseling practice (Johnson and Matross 1977). The investigation of counselor-client sense modality similarity addresses this concern.

Language, an active ingredient in the counseling process, has received a significant amount of research attention. Mahl and Schulze (1964) reported that past investigations have considered the ratio of verbs to adjectives, the frequency of various parts of speech, and the analysis of verb tense. The concept of sense modality similarity, however, had not been considered previously and very little attention has ever been given to the effects of language behavior on attraction (Altman 1974).

Almost every study conducted on counselor-client similarity revealed that curvilinear relationship between similarity and variables such as outcome and attitude toward therapy. This study offered no relationship, in part, because little is known about the relationship

among the three senses examined. In other words, if personality variables are considered, it would seem logical to assume that person A who is very aggressive would be dissimilar to person B who is very passive. The existence of one personality characteristic precludes the presence of the other. This type of information is not available when it comes to considering sense modality preference. It was this issue in conjunction with the unavailability of a standard instrument that initiated a significant effort to identify sense modality preference.

Initially, a paper and pencil measure was developed. This entailed three revisions and the final form utilized was known as the Sense Modality Preference Inventory (SMPI). (Note: A detailed explanation of the development of this instrument can be found in the methodology section of this report.) Though the reliability of the instrument were less than desired, its use in conjunction with the two additional methods of identification: a sense modality preference interview as described by Grinder and Bandler (1977) and a self-report measure, were considered more than adequate for this study. In addition, a fourth attempt was made in identifying sense modality preference by examining the three previously described methods. This was labeled the two-thirds method and was initiated first by considering the identity of each subjects sense modality preference by the initial three methods. If any two of the three agreed in identifying the subject as either visual, auditory, or kinesthetic, that individual was identified as having that preference under the two-thirds method.

An additional difficulty appeared in this study when it came to the data analysis. Since there was such a lack of agreement among the three sense preference identification methods (Appendix H) used and an unequal distribution of subjects according to the method used (Appendix B), it was considered advantageous to examine the client's level of attraction for counselors under each identification method rather than collectively. (Note: A more detailed explanation of this is contained in the methodology section.) This involved four separate analyses of the data, rather than one, as was originally planned. The results indicated that counselor attractiveness was not enhanced by similar sense modality.

Perhaps it might be best to consider another methodology in examining the concept of sense modality. Bieber et al. (1977) were also interested in the use of similar predicates by both counselors and clients even though their method of categorization differed. In this study actual tape recorded counseling sessions were examined. Twenty-five sessions were considered and a specific tally of verb usage was completed for the first, eleventh, and twenty-fifth interviews. Utilizing a method such as this one may enable researchers to determine whether the use of similar sense modality predicates has an effect on some other aspect of the counseling process.

The Bieber et al. (1977) study and the present study are the only ones that have examined the effects of language use similarity. Bieber et al. (1977) found that the types of similar verbs used between

counselor and client increased or decreased depending upon the classification of the verb and the number of counseling sessions conducted. The present study found no relationship between client sense modality preference and counselor attractiveness. There was some question, however, as to whether sense modality preference as proposed by Bandler and Grinder (1975) is as accessible as they intimate. This result indicates that a great deal of additional research territory is open to future investigations on language use similarity.

#### Social psychological counseling

The concept of sense modality preference and its possible effects upon counselor attractiveness is intriguing, particularly as a potential effect factor intrinsic to the counseling process. This is especially pertinent once consideration is given to the potential impact counselor attractiveness has been found to have on the counseling relationship.

Lewis and Walsh (1978) found that when students viewed an attractive and an unattractive female counselor, the attractive one was rated more favorably. In addition, this female counselor was considered more competent, professional, assertive, and relaxed. Carter (1978) found similar results. Cash et al. (1975) on the other hand found the same to be true for attractive male counselors.

Cash and Kehr (1978) found the same effects to be true for physically attractive non-professional counselors. Physically attractive counselors who self-disclose are rated even more favorably than those who do not (Cash and Salzbach, 1978).

When consideration is given to the client's appearance there are also some interesting results. For instance, Barocas and Vance (1974) offered a more positive prognosis for therapeutic outcome if the client was physically attractive. The same courtesy was not extended to physically unattractive clients. Davis et al. (1977) found this to be true as well.

Since the results of this study did not support the notion that similar sense modality would enhance counselor attractiveness, perhaps sense modality is more involved in another aspect of the counseling relationship. Examples of this might be communicator credibility or rapport. This assumption seems logical since counselor credibility has been found to be a factor that has sufficient impact in the social psychological approach to counseling (Schmidt and Strong 1971; Strong 1968; and Strong and Dixon 1971).

Lee et al. (1980) noted that similar gender is a salient variable in the social psychological approach to counseling. Sex similarity also had no effect in this study. Perhaps this is related to presenting problem, a variable which was not considered in this study. In other studies presenting problem has been found to have a fairly significant impact on a client's preference for a certain sex counselor (Carter 1978; Cash and Kehr 1978; and Cash and Salzbach 1978).

Interestingly enough, the concept of sense modality preference follows the recommendation that active behaviors rather than reputed ones be considered in the similarity model (Johnson and Matross 1977; and

Ross 1977). Yet, this study has failed to reveal that an active counselor behavior rather than one which has to do with the counselor's reputation will enhance counselor attractiveness

#### Recommendations for Further Study

Future investigations in the area of sense modality preference should initially focus on an assessment tool for identifying sense modality. A significant effort was made in this area, however, since three methods were utilized for this purpose. In addition, the combination of any of these two methods that agreed for each subject was also utilized in an attempt to identify each subject's sense modality preference. This proved to be of little use however, since the rate of agreement for these three methods was poor (Appendix H). From this effort one can conclude that the methods employed failed to even assess the possibilities of sense modality preference in that sense modality preference has little relationship to social attraction.

Another area in which sense modality preference may reveal some interesting implications is counselor supervision, both in the areas of how counselors in training respond to clients and also in relationship to the supervision process itself. Educators are aware that individuals utilize some sense more often than others in the learning process. Counselor education should focus on this area as a means of understanding the possible effects that sense modality similarity might have on counselor training.

Finally, when one considers the results of this study, there might be little purpose in employing the counselor-client sense modality similarity concept in the social psychological model of counseling. Specifically, in reference to this study, there is little evidence to warrant its use. The examination of the topic should be continued, however, since there has been a lack of research conducted on the Bandler and Grinder (1975) model, a fact noted by Goleman (1979).

The concept of sense modality similarity could contribute significantly to the theory of social psychological counseling, especially because the counselor who is perceived to be responsive is viewed to be socially attractive by the client (Johnson and Matross 1977). The foundation for the Bandler and Grinder (1975) model is built upon the assumption that if the counselor uses the same sense modality predicates as the client, the client will perceive the counselor to be a responsive person.

Additionally, the concept of perceived counselor attractiveness has too often depended upon the reputation of the counselor rather than the counselor's active behavior. In otherwords, in previous experiments subjects were either prompted about the qualities of an actual counselor or given a description of the attributes a counselor possessed and then asked to fill out an attraction scale on this individual. This particular methodology, however, has not produced any concrete results. Future studies need to standardize specific characteristics related

to social attraction among a series of actual counselors, let the subjects participate in a series of actual counseling interviews, and then determine the effects of these particular characteristics on counselor attraction.



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APPENDIX A. THE SENSE MODALITY PREFERENCE  
INVENTORY (SMPI) AND RELATED  
DATA

Name \_\_\_\_\_ Sex \_\_\_\_\_ Major \_\_\_\_\_

### SIX COLUMN METHOD

This exercise has been designed in order to measure your ability to identify certain types of words from a list. The words you choose are an indication of your perceptions about language.

Below are six lists of words. Each list contains nine words. You are to select three words from each list. Hint: The words do not appear in any special order, nor are there any special tricks which can be employed to identify these words. Rather, you are to select three words from each list on the basis of your intuitive feelings about these different words. Circle those words that you choose.

<u>Column I</u>	<u>Column II</u>	<u>Column III</u>	<u>Column IV</u>	<u>Column V</u>	<u>Column VI</u>
saw	say	bright	see	watch	gold
loudly	hot	overweight	ask	listen	told
called	observe	cold	hold	touch	cool
green	ridged	tell	purple	darting	show
softly	shimmer	squeal	quiet	speak	blast
walk	quiet	explode	crawl	warm	rough
badly	feel	silver	plainly	glitter	bright
held	hear	coarse	audibly	silent	scream
clearly	streak	present	poorly	smooth	heavy



# SIX COLUMN METHOD

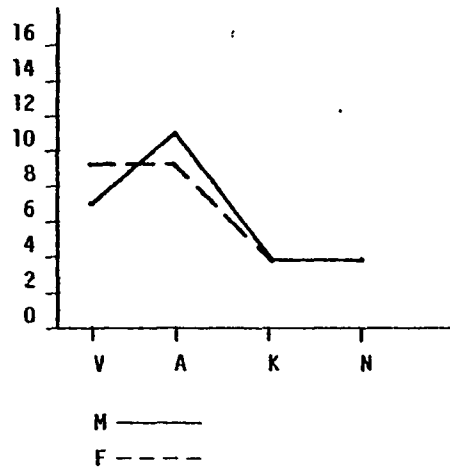


CHART A

C		+1	+2	+3	+4	+5	+6	+7	ST	T
V	M	1	1	1	1	1	1	1	7	16
	F	4	2	1	1	0	1	0	9	
A	M	7	1	0	3	0	0	0	11	20
	F	3	0	1	3	0	0	2	9	
K	M	0	2	0	1	0	1	0	4	8
	F	0	2	0	1	0	0	1	4	
N	M	-	-	-	-	-	-	-	4	8
	F	-	-	-	-	-	-	-	4	

N = 52

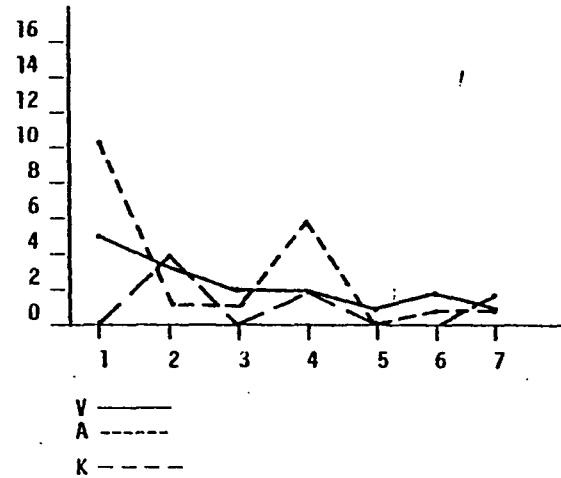


CHART B

Split - Half  
Reliability  
Coefficients

	M	F	T
V	.32	.88	.61
A	-.13	.48	.13
K	.37	.10	.24

Name \_\_\_\_\_ Sex \_\_\_\_\_ Major \_\_\_\_\_

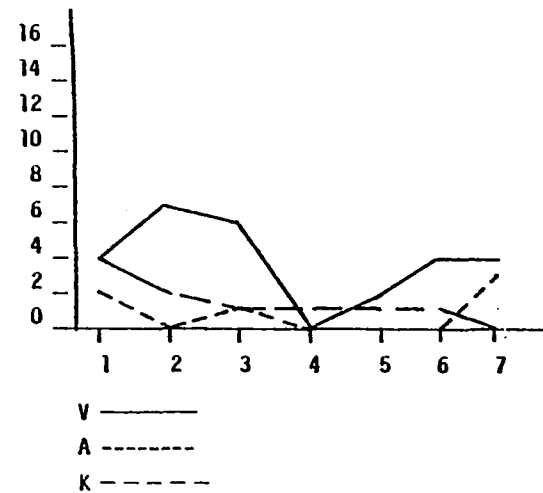
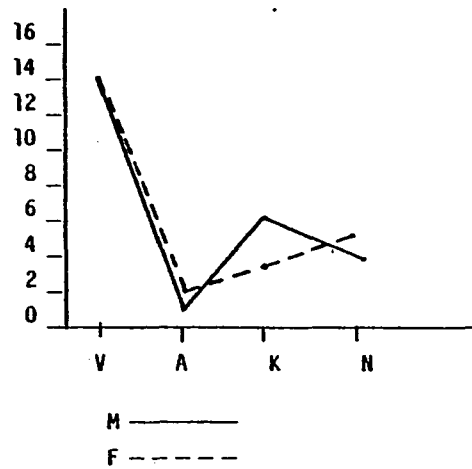
FORCED CHOICE

This exercise has been designed to measure your ability to identify certain types of words. The words you choose are an indication of your perceptions about language.

Below are eighteen sets of three words. Looking at each set across, choose the word you prefer over the other two. Circle that word. Hint: The words do not appear in any order, nor are there any special tricks which can be employed to identify these words. Rather, select the word from each set on the basis of your intuitive feelings.

- |                           |                             |
|---------------------------|-----------------------------|
| 1. see hold ask           | 10. shiny scream overweight |
| 2. quiet crawl purple     | 11. present coarse explode  |
| 3. poorly audibly plainly | 12. tell cold silver        |
| 4. listen watch touch     | 13. shimmer ridged quiet    |
| 5. darting warm speak     | 14. say hot streak          |
| 6. smooth silent glitter  | 15. hear feel observe       |
| 7. cool told gold         | 16. badly loudly clearly    |
| 8. blast show rough       | 17. green walk softly       |
| 9. squeal bright heavy    | 18. saw called held         |

# FORCED CHOICE



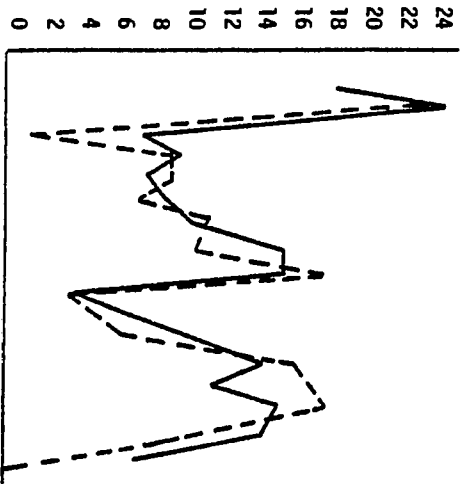
C		+1	+2	+3	+4	+5	+6	+7	ST	T
V	M	2	2	2	0	2	2	4	14	28
	F	2	5	4	0	0	2	0	14	
A	M	1	0	0	0	0	0	0	1	3
	F	1	0	1	0	0	0	0	2	
K	M	1	1	1	1	1	1	0	6	10
	F	3	1	0	0	0	0	0	4	
N	M	-	-	-	-	-	-	-	4	9
	F	-	-	-	-	-	-	-	5	

Split-Half  
Reliability  
Coefficients

	M	F	T
V	.69	-.56	.33
A	.23	-.34	.08
K	.30	.30	.28

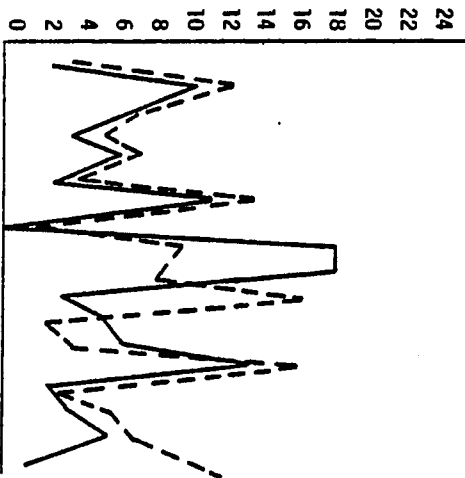
## PREDICATES SELECTED

**VISUAL**



bright  
 clearly  
 darting  
 glitter  
 gold  
 green  
 observe  
 plainly  
 present  
 purple  
 saw  
 see  
 shimmer  
 show  
 silver  
 streak  
 watch

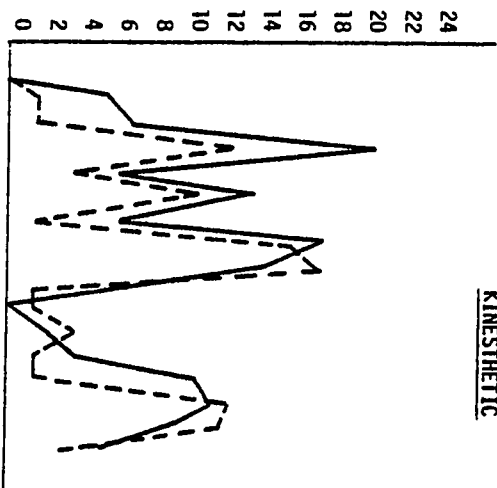
## AUDITORY



ask  
audibly  
blast  
called  
explode  
hear  
listen  
loudly  
quiet  
quiet  
say  
scream  
silent  
softly  
speak  
squal  
tell  
told

PREDICATES SELECTED

KINESTHETIC



Name \_\_\_\_\_ Sex \_\_\_\_\_ Major \_\_\_\_\_

REVISED FORCED CHOICE

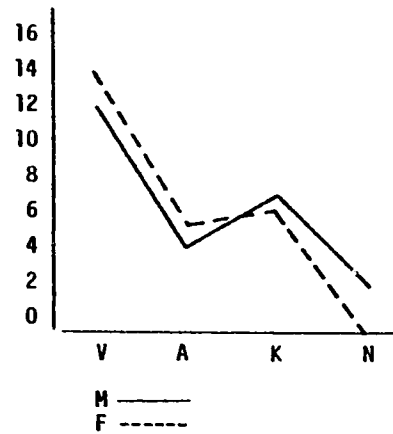
This exercise has been designed to measure your preference for certain types of words. The words you choose are an indication of your perceptions about language.

Below are eighteen sets of three words. Looking at each set across, choose the word you prefer over the other two. Circle that word.  
Hint: the words do not appear in any order nor are there any special tricks which can be employed to identify these words. Rather, select the word from each set on the basis of your intuitive feelings.

- |                                 |                               |
|---------------------------------|-------------------------------|
| 1. plainly    explode    rough  | 2. told    observe    walk    |
| 3. audibly    shiny    hold     | 4. green    cold    scream    |
| 5. held    bright    softly     | 6. present    smooth    quiet |
| 7. clearly    quiet    warm     | 8. ridged    darting    speak |
| 9. overweight    hear    purple | 10. saw    loudly    badly    |
| 11. heavy    ask    watch       | 12. silent    crawl    gold   |
| 13. coarse    glitter    called | 14. hot    tell    streak     |
| 15. touch    show    blast      | 16. feel    silver    listen  |
| 17. say    cool    shimmer      | 18. poorly    see    squeal   |

# REVISED FORCED CHOICE

GRAPH A



GRAPH B

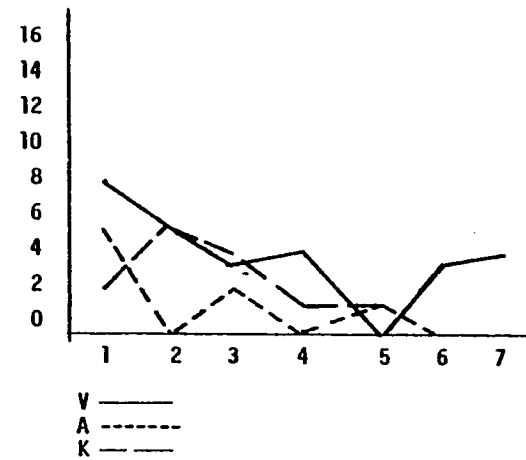


CHART A

C		+1	+2	+3	+4	+5	+6	+7	ST	T
V	M	5	3	1	0	0	2	2	12	26
	F	3	2	2	4	0	1	2	14	
A	M	2	0	1	0	0	0	0	4	9
	F	3	0	1	0	1	0	0	5	
K	M	1	3	2	0	1	0	0	7	13
	F	1	2	2	1	0	0	0	5	
N	M	-	-	-	-	-	-	-	2	2
	F	-	-	-	-	-	-	-	0	

N = 50

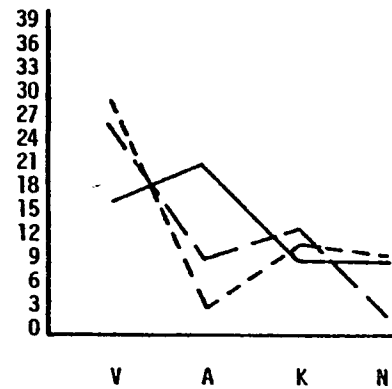
CHART B

Split-Half  
Reliability  
Coefficients

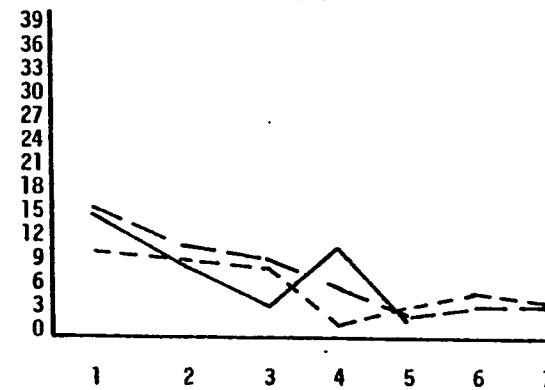
	M	F	T
V	.39	.22	.30
A	.33	.01	.11
K	.16	.33	.40

# COMPARISON OF THREE

GRAPH A



GRAPH B



6 Column ———  
Forced - - - - -  
Re Force - . - . -

C		+1	+2	+3	+4	+5	+6	+7	T
V	S	5	3	2	2	1	2	1	16
	F	4	7	6	0	2	4	4	28
	RF	8	5	3	4	0	3	4	26
A	S	10	1	1	6	0	0	2	20
	F	2	0	1	0	0	0	0	3
	RF	5	0	2	0	1	0	0	9
K	S	0	4	0	2	0	1	1	8
	F	4	2	1	1	1	1	0	10
	RF	2	5	4	1	1	0	0	13

S - Six Columns  
F - Forced Choice  
RF - Revised Forced

	SPLIT-HALF		RE FORCE
	SIX COL	FORCED	
V	.61	.33	.30
A	.13	.08	.11
K	.24	.28	.40



Name \_\_\_\_\_ Sex \_\_\_\_\_ Major \_\_\_\_\_

### SENSE MODALITY PREFERENCE INVENTORY (SMPI)

This exercise has been designed to measure your preference for certain types of words. The words you choose are an indication of your perceptions about language.

Below are eighteen sets of three words. Looking at each set across, choose the word you prefer over the other two. Circle that word. Hint: the words do not appear in any order nor are there any special tricks which can be employed to identify these words. Rather, select the word from each set on the basis of your intuitive feelings.

- |                                 |                               |
|---------------------------------|-------------------------------|
| 1. plainly    explode    rough  | 2. told    observe    walk    |
| 3. audibly    shiny    hold     | 4. green    cold    scream    |
| 5. held    bright    softly     | 6. present    smooth    quiet |
| 7. clearly    quiet    warm     | 8. ridged    darting    speak |
| 9. overweight    hear    purple | 10. saw    loudly    badly    |
| 11. heavy    ask    watch       | 12. silent    crawl    gold   |
| 13. coarse    glitter    called | 14. hot    tell    streak     |
| 15. touch    show    blast      | 16. feel    silver    listen  |
| 17. say    cool    shimmer      | 18. poorly    see    squeal   |

APPENDIX B: DISTRIBUTION OF SUBJECTS ACCORDING TO METHOD USED FOR  
SENSE MODALITY PREFERENCE IDENTIFICATION

Distribution of Subjects/According to Method

	Interview	Inventory	Self Report
Visual	68	73	132
Auditory	3	45	23
Kinesthetic	56	47	22

**APPENDIX C: COUNSELOR SCRIPT**

COUNSELOR SCRIPT

Instructions: Read each column of words into the microphone.  
 The only thing you need to concern yourself with is that you pronounce each word clearly and that you leave approximately the same pause between each word.

<u>Visual</u>	<u>Auditory</u>	<u>Kinesthetic</u>
saw	called	held
purple	quiet	crawl
clearly	loudly	badly
each	each	each
watch	listen	touch
streak	say	hot
glitter	silent	smooth
rather	rather	rather
silver	tell	cold
show	blast	rough
bright	squeal	heavy
are	are	are
green	softly	walk
shimmer	quiet	ridged
gold	told	cool
order	order	order
see	ask	hold
darting	scream	poorly
observe	audibly	course
been	been	been

APPENDIX D: ADJUSTED FORM OF THE INTERPERSONAL JUDGEMENT SCALE

Interpersonal Judgement ScaleAdjusted Form

## 1. Intelligence (check one)

I believe that this person is

- 7 very much above average in intelligence.
- 6 above average in intelligence.
- 5 slightly above average in intelligence.
- 4 average in intelligence.
- 3 slightly below average in intelligence.
- 2 below average in intelligence.
- 1 very much below average in intelligence.

## 2. Knowledge of Counseling (Adjusted from knowledge of Current Events).

I believe that this person is

- 1 very much below average in their knowledge of counseling.
- 2 below average in their knowledge of counseling.
- 3 slightly below average in their knowledge of counseling.
- 4 average in their knowledge of counseling.
- 5 slightly above average in their knowledge of counseling.
- 6 above average in their knowledge of counseling.
- 7 very much above average in their knowledge of counseling.

## 3. Morality

This person impresses me as being

- 7 extremely moral.
- 6 moral.
- 5 moral to a slight degree.
- 4 neither particularly moral nor particularly immoral.
- 3 immoral to a slight degree.
- 2 immoral.
- 1 extremely immoral.

## 4. Adjustment

I believe that this person is

- 1 extremely maladjusted.
- 2 maladjusted.
- 3 maladjusted to a slight degree.
- 4 neither particularly maladjusted nor particularly well adjusted.
- 5 well adjusted to a slight degree.
- 6 well adjusted.
- 7 extremely well adjusted.

## 5. Personal Feelings

- I feel that I would probably
- 7 like this person very much.
  - 6 like this person.
  - 5 like this person to a slight degree.
  - 4 neither particularly like nor particularly dislike this person.
  - 3 dislike this person to a slight degree.
  - 2 dislike this person.
  - 1 dislike this person very much.

## 6. Working together in Counseling (Adjusted from in an Experiment).

- I believe that I would
- 1 very much dislike working with this person in counseling.
  - 2 dislike working with this person in counseling.
  - 3 dislike working with this person in counseling to a slight degree.
  - 4 neither particularly dislike nor particularly enjoy working with this person in counseling.
  - 5 enjoy working with this person in counseling to a slight degree.
  - 6 enjoy working with this person in counseling.
  - 7 very much enjoy working with this person in counseling.



APPENDIX E: TRAINING MANUAL FOR RATERS

RATER'S TRAINING MANUAL

People collect information about the environment through their sense. Of the five sense, sight, sound, and touch are used most often.

Some therapists believe that it is possible to determine which sense a client depends upon most often by examining his/her use of language.

Richard Bandler and John Grinder, the two leading proponents of meta-language analysis, describe the process as follows:

"In order to identify which of the representational (sense) systems is the client's most highly valued one, the therapist needs only to pay attention to the predicates which the client uses to describe his experiences. In describing his experiences, the client makes choices (usually unconsciously) about which words best represent his experiences. Among these are a special set called predicates. Predicates are words used to describe portions of a person's experience which correspond to the processes and relationships in that experience. Predicates appear as verbs, adjectives, and adverbs in the sentences which the client uses to describe his experiences.

The following sentences address each sense system.

He heard the screaming cat. (Auditory)

He saw the black cat. (Visual)

He petted the furry cat. (Kinesthetic)

For your information:

Adverb - describes, modifies a verb. He ran quickly.

Verb - is the action word in a sentence. He ran quickly.

Adjective - modifies a noun. The black car was stalled.

The following sheets contain a series of dialogues I recorded. Each one contains a series of three or four statements by an individual. My purpose in giving these papers to you is to request that you look at each person's dialogue, considering the information I just gave you and determine whether you think they are more visual, auditory, or kinesthetic in their orientation.

Please do not concern yourself with the number of people you identify in each category. Rather, deal with each one separately.

Additionally, you should realize that not all predicates fall in one of these three categories. Some words like think, remember, are called fuzzy function words and they will not be included in your analysis.

Before you begin, let's try an example:

Fishing when the sun's coming up on the lake. Grass all smooth.  
K V K

Working the top waters a lot of confusion. Somebody is hurt.  
K K K

A lot of trees, a lot colder.

A lot of people, lively music, sticky treats. a lot of kids having fun.  
K K K

All the excitement, parents, people, different from how they would usually be, real competitive.  
K

The purpose here is not to see how many predicates you identify but rather to get your general reaction to a person. Do you think they are visual, auditory, or kinesthetic.

In the example, I think it is quite clear, that this person is kinesthetic. All of the identified predicates have to do with tactile sensations.

Examine each person's dialogue and identify for me, their most desired sense.

Some examples of the various types of words are as follows:

<u>Visual</u>	<u>Auditory</u>	<u>Kinesthetic</u>
shiny	explode	rough
bright	audibly	hold
clearly	quiet	warm
purple	hear	overweight
watch	ask	heavy
glitter	called	coarse

APPENDIX F: SENSE MODALITY PREFERENCE INVENTORY

Name \_\_\_\_\_ Sex \_\_\_\_\_ Major \_\_\_\_\_

SENSE MODALITY PREFERENCE INVENTORY

This exercise has been designed to measure your ability to identify certain types of words. The words you choose are an indication of your perceptions about language.

Below are eighteen sets of three words. Looking at each set across, choose the word you prefer over the other two. Circle that word. Hint: The words do not appear in any order, nor are there any special tricks which can be employed to identify these words. Rather, select the word from each set on the basis of your intuitive feelings.

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| 1. see    hold    ask           | 10. shiny    scream    overweight |
| 2. quiet    crawl    purple     | 11. present    coarse    explode  |
| 3. poorly    audibly    plainly | 12. tell    cold    silver        |
| 4. listen    watch    touch     | 13. shimmer    ridged    quiet    |
| 5. darting    warm    speak     | 14. say    hot    streak          |
| 6. smooth    silent    glitter  | 15. hear    feel    observe       |
| 7. cool    told    gold         | 16. badly    loudly    clearly    |
| 8. blast    show    rough       | 17. green    walk    softly       |
| 9. squeal    bright    heavy    | 18. saw    called    held         |

**APPENDIX G: SUBJECTS' FREE ASSOCIATION RESPONSE SHEET**

Name \_\_\_\_\_ Sex \_\_\_\_\_ Major \_\_\_\_\_

FREE ASSOCIATION RESPONSE SHEET

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_
13. \_\_\_\_\_
14. \_\_\_\_\_
15. \_\_\_\_\_
16. \_\_\_\_\_
17. \_\_\_\_\_
18. \_\_\_\_\_
19. \_\_\_\_\_
20. \_\_\_\_\_



APPENDIX H: RATE OF AGREEMENT FOR ATTRACTION SCORES

Rate of Agreement for Attraction Scores

## SELF REPORT

		Visual	Auditory	Kinesthetic
IJS	Visual	.61	-	-
	Auditory	-	.78	-
	Kinesthetic	-	-	.67

## APPENDIX I: STATISTICAL TABLES

Table 4. Analysis of variance for subjects categorized by interview method

Sources	df	ss	ms	F
Between subjects				
Client sex	1	15.58	15.58	.96
Client Verb Preference	1	92.07	92.07	5.69*
Counselor Verb Preference	2	19.29	9.64	.31
Within subjects				
Client sex x client verb	1	0.00	0.00	0.00
Client sex x counselor verb	2	6.91	3.45	.11
Client verb x counselor verb	2	0.82	0.41	.01
Client sex x client verb x counselor verb	2	5.89	2.94	.09
Error between subjects	36	582.44	16.17	
Error between subjects	72	2191.	30.43	

\* Significance at the .05 level

Table 5. Analysis of variance for subjects categorized by SMPI method

Sources	df	ss	ms	F
Between Subjects				
Client Sex	1	67.26	67.26	2.59
Client Verb Preference	2	100.07	50.03	1.92
Counselor Verb Preference	2	93.71	46.85	2.54
Within Subjects				
Client sex x client verb	2	8.47	4.23	0.16
Client sex x counselor verb	2	44.10	22.05	1.19
Client verb x counselor verb	4	64.29	16.07	0.87
Client sex x client verb x counselor verb	4	14.33	3.58	0.19
Error between subjects	<u>54</u>	<u>1402.20</u>	<u>25.96</u>	
Error between subjects	108	1985.42	18.38	

Table 6. Analysis of variance for subjects categorized by self-report method

Sources	df	ss	ms	F
Between subjects				
Client sex	1	24.55	24.55	1.42
Client verb preference	2	2.91	1.45	0.08
Counselor verb preference	2	11.91	5.95	0.22
Within subjects				
Client sex x client verb	2	110.93	55.46	3.20
Client sex x counselor verb	2	21.93	10.96	0.41
Client verb x counselor verb	4	85.64	21.41	0.80
Client sex x client verb x counselor verb	4	85.21	21.30	0.80
Error between subjects	24	414.80	17.28	
Error within subjects	48	1271.18	26.48	

Table 7. Analysis of variance for subjects categorized by two-thirds method

Sources	df	ss	ms	F
Between subjects				
Client sex	1	29.47	29.47	1.44
Client verb preference	1	0.33	0.33	0.01
Counselor verb preference	2	58.96	29.48	1.87
Within subjects				
Client sex x client verb	1	0.19	0.19	0.009
Client sex x counselor verb	2	19.91	19.91	1.26
Client verb x counselor verb	2	30.78	30.78	1.95
Client sex x client verb x counselor verb	2	4.13	4.13	0.26
Error between subjects	16	325.46	20.34	
Error within subjects	32	503.33	15.72	

APPENDIX J: MEAN ATTRACTION SCORES OF  
FOUR SENSE MODALITY METHODS



Table 8 . Mean ratings of counselor attractiveness by subjects identified with the interview method

N =120 Client	Male Counselor						Female Counselor					
	Visual		Auditory		Kinesthetic		Visual		Auditory		Kinesthetic	
	M	F	M	F	M	F	M	F	M	F	M	F
Visual	29.0	28.6	30.1	26.3	26.8	23.4	25.7	28.3	25.7	32.4	25.8	28.6
Auditory	-	-	-	-	-	-	-	-	-	-	-	-
Kines- thetic	30.2	30.2	28.3	26.7	27.6	28.3	28.8	28.7	28.1	30.5	29.1	28.4
	29.6	29.4	29.2	26.5	27.2	25.8	27.2	28.5	26.9	31.4	27.4	28.5

**Table 9. Mean ratings of counselor attractiveness by subjects identified with the SMPI method**

N=120 Client	Male Counselor						Female Counselor					
	Visual		Auditory		Kinesthetic		Visual		Auditory		Kinesthetic	
	M	F	M	F	M	F	M	F	M	F	M	F
Visual	27.0	29.8	27.1	29.4	26.3	28.6	30.8	29.6	26.9	28.6	29.9	27.5
Auditory	26.0	29.1	27.2	38.0	25.5	27.3	25.9	28.6	27.2	26.2	25.6	27.2
Kines- thetic	30.9	31.6	28.2	25.8	27.3	27.1	31.0	30.6	28.1	26.4	27.2	27.1
	27.9	30.1	27.5	27.7	26.3	27.6	29.2	29.6	27.4	27.0	27.5	27.2

Table 10. Mean ratings of counselor attractiveness by subjects identified with the self-report method

N = 120 Client	Male Counselor						Female Counselor					
	Visual		Auditory		Kinesthetic		Visual		Auditory		Kinesthetic	
	M	F	M	F	M	F	M	F	M	F	M	F
Visual	24.0	28.6	24.6	31.4	25.0	28.0	26.0	31.0	30.0	24.6	23.0	23.8
Auditory	30.0	27.2	26.8	30.0	27.0	31.6	30.6	26.8	29.6	30.6	26.0	30.0
Kines- thetic	32.0	26.6	28.4	29.0	28.4	28.4	35.0	30.0	29.0	30.2	30.2	30.4
	28.6	27.4	26.6	30.1	26.8	29.3	30.5	29.2	29.5	29.5	26.4	28.0

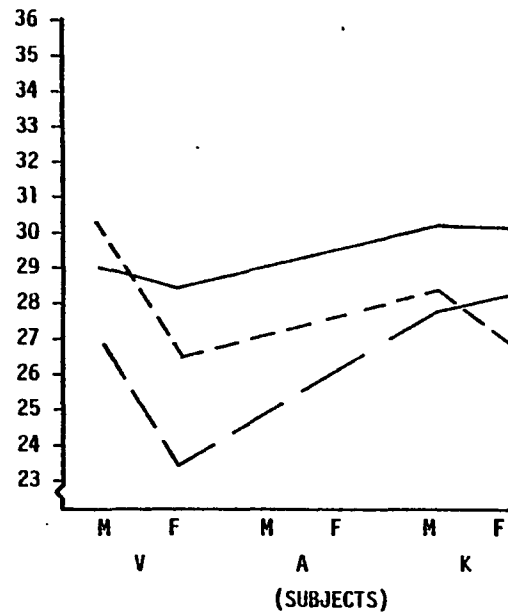
Table 11. Mean ratings of counselor attractiveness by subjects identified with the two-thirds method

N = 120 Client	Male Counselor						Female Counselor					
	Visual		Auditory		Kinesthetic		Visual		Auditory		Kinesthetic	
	M	F	M	F	M	F	M	F	M	F	M	F
Visual	23.4	25.4	26.4	29.6	24.6	25.6	31.4	28.4	27.4	27.8	28.8	26.2
Auditory	-	-	-	-	-	-	-	-	-	-	-	-
Kines- thetic	29.4	28.8	28.2	28.4	26.4	29.0	29.4	29.2	28.2	25.0	28.4	27.4
	26.4	27.1	27.3	29.0	25.5	27.3	30.4	28.8	27.8	26.4	28.6	26.8

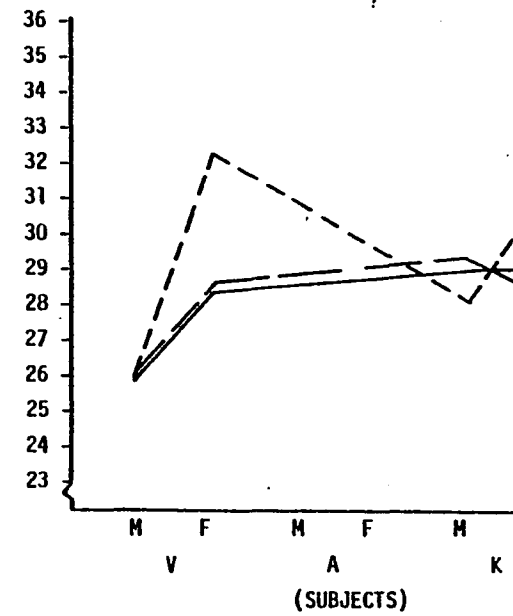
APPENDIX K: GRAPHIC PORTRAYAL OF ATTRACTIVENESS SCORES BY METHOD OF  
SENSE MODALITY IDENTIFICATION

MEAN SCORES OF ATTRACTION FOR COUNSELORS BY SUBJECTS IDENTIFIED BY THE INTERVIEW

(MALE COUNSELOR)

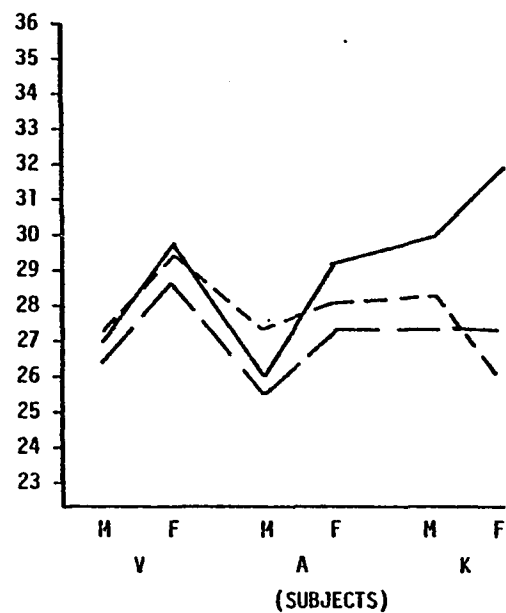


(FEMALE COUNSELOR)



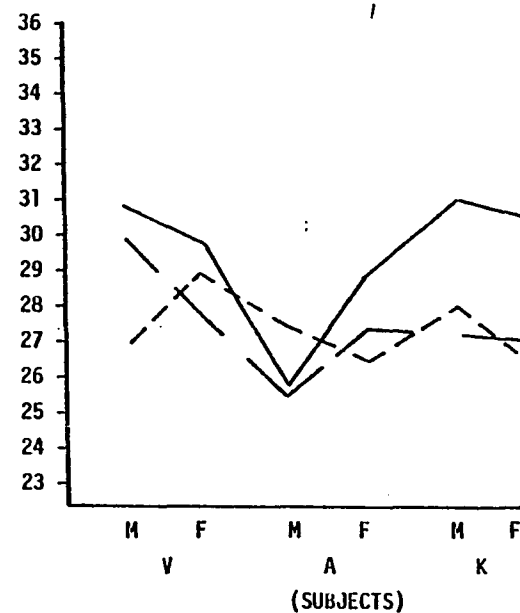
MEAN SCORES OF ATTRACTION FOR COUNSELORS BY SUBJECTS IDENTIFIED BY THE INVENTORY

(MALE COUNSELOR)



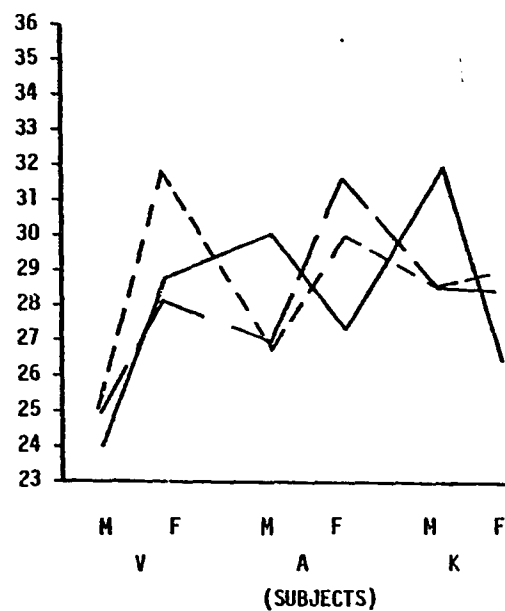
Visual Counselor —————  
 Auditory Counselor - - - - -  
 Kinesthetic Counselor ————

(FEMALE COUNSELOR)



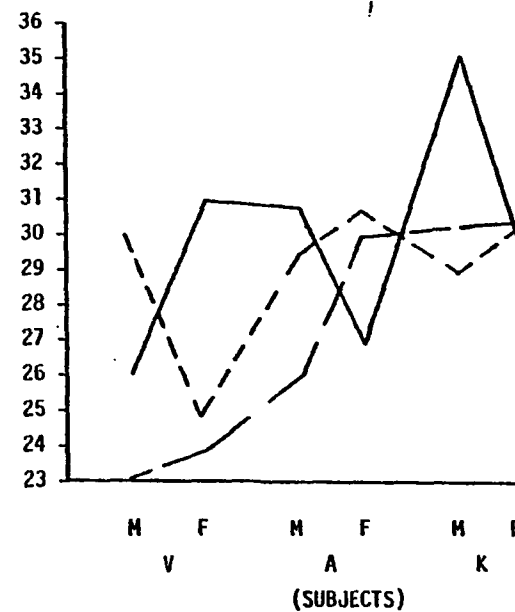
MEAN SCORES OF ATTRACTION FOR COUNSELORS BY SUBJECTS IDENTIFIED BY SELF REPORT

(MALE COUNSELOR)



Visual Counselor —————  
 Auditory Counselor - - - - -  
 Kinesthetic Counselor ————

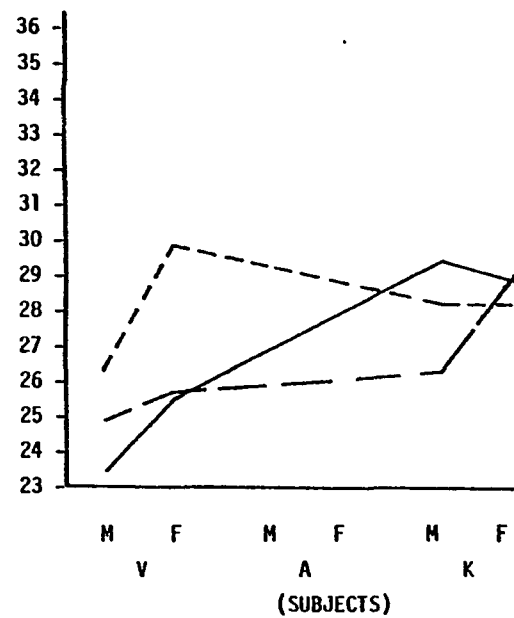
(FEMALE COUNSELOR)



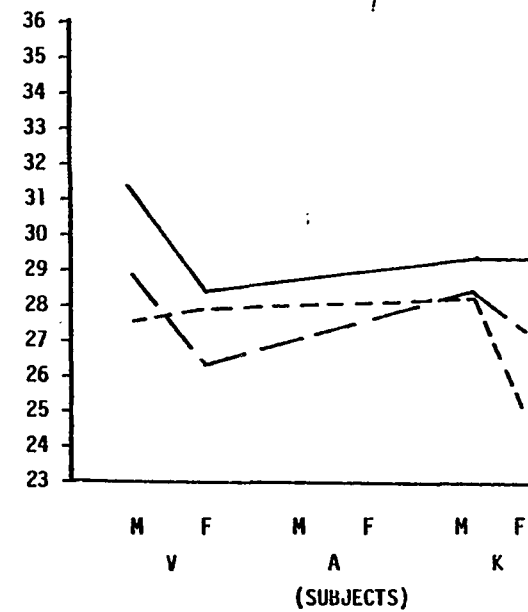


MEAN SCORES OF ATTRACTION FOR COUNSELOR BY SUBJECTS IDENTIFIED BY TWO THIRDS

(MALE COUNSELOR)



(FEMALE COUNSELOR)



Visual Counselor —————  
 Auditory Counselor - - - - -  
 Kinesthetic Counselor ————

APPENDIX L: SUBJECT DATA

Subject Number	Sex	Int <sup>1</sup>	SMPI <sup>2</sup>	SR <sup>3</sup>	Visual Counselor	Auditory Counselor	Kines- thetic Counselor
1	F	K	K	K	30	30	30
2	M	K	V	V	20	24	21
3	F	V	A	V	24	24	24
9	F	K	V	V	32	26	23
10	F	V	V	K	27	28	29
12	M	V	A	V	25	24	24
14	M	-	V	V	21	33	27
15	F	V	A	V	19	30	25
20	M	V	A	V	24	24	25
21	F	K	V	V	25	40	27
23	F	K	V	V	28	18	30
24	M	K	V	V	30	18	28
25	F	V	N	V	31	31	31
27	M	K	K	V	31	29	22
30	F	K	A	V	30	36	25
31	F	K	V	V	29	22	25
32	M	V	V	V	22	33	22
33	F	V	V	V	36	26	34
34	F	K	V	-	27	24	24
35	F	V	A	V	32	20	18
43	F	V	V	V	28	19	17
44	F	V	V	V	36	36	32
45	F	V	A	V	29	17	21
48	F	K	K	V	40	19	31
50	M	K	A	V	27	32	23
51	F	K	V	V	24	35	26
52	F	K	V	V	34	39	36
54	M	K	N	V	24	32	24
55	M	V	A	V	24	24	24
56	M	-	K	V	32	28	27
57	M	-	K	V	30	19	29
58	M	V	V	V	32	28	30
60	F	K	A	V	25	17	26
62	M	K	V	V	32	25	27
64	M	V	V	V	33	29	28
65	F	K	V	V	24	24	24
66	M	V	V	V	26	30	29
67	F	V	V	V	31	24	24
72	F	V	V	V	37	37	28
79	M	V	K	V	29	27	28
80	M	V	V	K	26	26	26
82	M	V	V	V	28	25	25

<sup>1</sup> Interview Method<sup>2</sup> Sense Modality Preference Inventory<sup>3</sup> Self Report

Subject Number	Sex	Int <sup>1</sup>	SMPI <sup>2</sup>	SR <sup>3</sup>	Visual Coun- selor	Auditory Coun- selor	Kines- thetic Counselor
86	F	V	V	V	34	34	24
87	M	K	V	A	29	28	29
89	F	V	A	V	24	23	22
92	F	V	V	A	24	27	26
93	M	-	A	V	25	33	26
94	M	V	V	K	41	31	33
98	F	V	V	V	24	35	26
102	F	V	A	V	30	30	28
105	M	-	A	V	24	24	24
110	F	K	A	V	31	29	26
114	F	V	K	V	32	33	27
115	F	V	N	V	27	42	29
116	M	V	V	V	30	27	26
124	F	K	V	A	30	31	38
125	M	K	V	V	28	28	31
128	F	K	V	V	34	31	30
129	M	K	V	V	37	36	33
131	M	K	A	A	30	28	21
134	F	V	N	K	23	27	19
135	F	K	V	V	25	26	24
137	M	A	A	A	28	28	27
139	M	V	V	A	34	21	29
140	F	K	A	V	34	37	35
143	F	V	A	V	28	28	28
144	F	V	A	K	25	34	35
145	F	K	A	V	23	36	29
146	F	V	K	A	28	34	30
151	F	K	A	K	28	26	29
153	F	-	A	-	29	28	29
157	F	-	K	K	28	28	28
160	M	V	A	A	29	30	28
161	M	K	K	V	29	28	30
162	F	K	K	V	28	28	28
164	F	V	N	K	34	35	36
172	M	K	K	V	28	28	30
173	M	K	A	V	29	29	30
174	M	K	K	V	29	27	28
176	M	-	K	A	33	31	23
181	M	K	V	V	35	34	34
183	M	-	K	V	31	31	25
184	M	K	K	V	33	32	31
186	M	V	V	V	22	26	26

<sup>1</sup> Interview Method

<sup>2</sup> Sense Modality Preference Inventory

<sup>3</sup> Self Report

Subject Number	Sex	Int <sup>1</sup>	SMPI <sup>2</sup>	SR <sup>3</sup>	Visual Coun- selor	Auditory Coun- selor	Kines- thetic Counselor
188	F	-	K	V	28	33	36
192	M	V	A	V	25	24	24
193	M	V	A	V	24	24	25
194	F	K	A	V	30	36	25
195	F	V	A	V	32	20	18
196	F	V	A	V	29	17	21
197	M	-	A	V	27	32	23
198	M	V	A	V	24	24	24
200	F	V	A	-	35	35	31
201	F	K	A	V	25	17	26
203	F	V	A	V	30	30	28
204	M	-	A	V	24	24	24
205	M	A	A	A	28	28	27
206	M	V	A	A	29	30	28
207	M	K	A	V	29	29	28
208	M	V	A	V	25	24	24
209	M	V	A	V	24	25	25
211	F	K	K	K	30	30	30
212	F	V	K	V	28	19	17
213	F	-	K	V	40	19	31
214	M	-	K	V	32	28	27
215	M	-	K	V	30	19	29
216	M	V	K	V	29	27	28
217	F	V	K	V	32	33	27
218	F	-	K	K	28	28	28
219	M	K	K	V	29	28	30
220	F	K	K	V	29	28	29
221	M	K	K	V	28	28	30
222	M	K	K	V	26	29	25
223	M	-	K	A	33	31	23
224	M	-	K	V	31	31	25
225	M	K	K	V	33	32	31
226	F	-	V	V	28	33	36
227	F	K	K	K	30	30	30
228	M	K	K	V	33	29	22
229	F	V	K	V	28	19	17
230	F	-	K	V	40	19	31
231	M	-	K	V	32	28	27
232	F	V	K	V	32	33	27
233	F	-	V	V	28	28	28
234	F	V	V	V	19	36	29

<sup>1</sup> Interview Method

<sup>2</sup> Sense Modality Preference Inventory

<sup>3</sup> Self Report

Subject Number	Sex	Int <sup>1</sup>	SMPI <sup>2</sup>	SR <sup>3</sup>	Visual Coun- selor	Auditory Coun- selor	Kinesthe- tic Coun- selor
236	F	V	V	V	19	36	29
238	M	KV	V	V	20	24	21
239	M	-	V	K	26	26	26
240	M	-	V	K	41	31	33
241	M	-	V	K	26	26	26
242	M	-	V	K	40	32	33
243	M	-	V	K	24	25	25
244	M	V	V	K	40	30	32
245	M	V	K	V	27	26	27
246	M	-	V	K	40	26	31
247	F	-	V	A	24	27	26
248	F	K	V	A	30	31	38
249	F	V	K	A	28	34	30
250	F	-	V	A	24	26	26
251	F	V	K	A	29	33	31
252	F	K	V	A	30	30	30
253	F	-	V	A	27	24	26
254	M	K	V	A	29	28	29
255	F	K	K	K	30	29	30
256	F	-	A	V	25	17	26
257	F	V	K	V	28	19	17
258	M	-	K	V	32	28	27
259	M	K	V	A	29	29	29

<sup>1</sup> Interview Method

<sup>2</sup> Sense Modality Preference Inventory

<sup>3</sup> Self Report